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RELATIONSHIPS BETWEEN PERSONALITY VARIABLES AND CLASSROOM
BEHAVIOR OF TEACHING INTERNS.

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A STUDY WAS UNDERTAKEN TO DETERMINE THE RELATIONSHIP
BETWEEN (TEACHER) INTERNS' SCORES ON PERSONALITY SCHEDULES
AND CASE STUDY INSTRUMENTS AND THE EMOTIONAL CLIMATE OF THEIR
CLASSROOM. THERE WERE THREE GENERAL CATEGORIES OF
HYPOTHESES--(1) THOSE PERTAINING TO THE RELATIONSHIP BETWEEN
PERSONALITY VARIABLES AND BEHAVIORAL VARIABLES, (2) THOSE
PERTAINING TO OTHER CHARACTERISTICS OF THE TEACHING INTERN
AND BOTH PERSONALITY AND BEHAVIORAL VARIABLES, AND (3) THOSE
PERTAINING TO PERSONALITY PERCEPTION AND ITS RELATIONSHIP TO
BOTH PERSONALITY VARIABLES AND TEACHING BEHAVIOR. SUBJECTS IN
THE STUDY WERE INTERNS FROM ELEMENTARY SCHOOLS, JUNIOR HIGH,
AND SENIOR HIGH SCHOOLS. THE SUBJECTS WERE RATED BY TRAINED
OBSERVERS USING AN OBSERVATION SCHEDULE DESIGNED TO DECREASE
THE AMOUNT OF JUDGMENT REQUIRED OF THE OBSERVER. THIS
SCHEDULE WAS NAMED OSCAR (MEDLEY AND MITZEL). THE SUBJECTS
WERE ADMINISTERED THE EDWARDS, THURSTONE, AND "DEBBIE" AND
"ALICE" CASE INSTRUMENTS BEFORE BEGINNING THEIR INTERN WORK.
DATA FROM THE TESTS WERE ANALYZED SEPARATELY BY SEX AND
TEACHING LEVEL IN RELATION TO THE OSCAR SCORE. EACH MATRIX
WAS FACTOR ANALYZED TO DISCLOSE THE FUNDAMENTAL DIMENSIONS
IMPLICIT IN THE MEASURE. THE PROJECT FAILED TO CONFIRM ANY OF
THE PARTICULAR RELATIONSHIPS FOUND BETWEEN OBSERVED BEHAVIOR
AND PERSONALITY SCHEDULES BY RYANS, AND MEDLEY AND MITZEL.
RELATIONSHIPS WERE NOT CLEAR. A NUMBER OF SUGGESTIONS FOR
FURTHER RESEARCH, USING TEACHERS RATHER THAN INTERNS, WERE
PRESENTED. (JC)

U. S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
Office of Education

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AND CLASSROOM BEHAVIOR OF TEACHING INTERNS**

Cooperative Research Project No. 1717

Ira J. Gordon

University of Florida
Gainesville, Florida

1964

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CHAPTER I

THE PROBLEM

Introduction

The concept that the teacher's personality influences the behavior of pupils in the classroom is widely acknowledged. Some would see teacher personality as the most crucial variable governing learning in the classroom setting. However, the actual dynamics are little understood. Just how the teacher's personality is evidenced in her behavior and in turn how its influence is manifested in the behavior of pupils has not been clearly charted. It is known that certain general categories of teacher behavior, such as dominative or integrative, punitive or non-punitive, causally-oriented or non-causally oriented, produce particular effects in pupil behavior. The studies which indicate this (Anderson, 1945-6, Kounin, 1961, Ojemann, 1963) all relate teacher behavior categories to pupil behaviors without utilizing the construct of "personality."

Even this task is difficult. As Ryans has so ably stated, "the relationship between teacher behavior and pupil behavior is not easy to demonstrate empirically partly because of the difficulties of observation and mensuration and, undoubtedly, partly because of the complex interactions among teacher and pupil characteristics." (Ryans 1960, b 2).

When the additional issue of prediction of teacher and pupil classroom behavior from measures of teacher personality is added, the problem becomes even more complex. It is generally agreed that such ambiguous constructs as "teacher effectiveness"

or "personality" are too large to be generally useful in studies attempting to relate aspects of personality with aspects of the teacher's behavior and the pupil's behavior in the classroom.

Possible approaches to the problem of the relationship of teacher personality and classroom behavior of teachers and pupils are offered by the Teacher Characteristic Studies under the direction of Ryans (1960 a) and the studies of the Research Office of the Division of Teacher Education of the City of New York conducted by Medley and Mitzel (1958, 1959, 1961).

Rather than deal with "teacher effectiveness" both these studies developed methodologies for the assessment of that portion of classroom behavior which could be designated "emotional climate."

Ryans, in the Teacher Characteristics Study, defined one pattern of behavior (Pattern X₀) as "understanding, friendly, democratic versus aloof, egocentric, restricted teacher behavior."

A teacher's score on this pattern was determined through observation, using a record which required judges' rating on the following dimensions:

autocratic	-	democratic
aloof	-	responsive
restricted	-	understanding
harsh	-	kindly
pessimistic	-	optimistic ¹

¹For glossary of these terms, see Appendix A.

Ryans (1951) found a positive relationship between the Thurstone Temperament Schedule subscales Dominant, Impulsive and Sociable and aspects of the above pattern in elementary teachers.

The subjects he studied were third and fourth grade teachers in different communities. The particular factors were: Factor A, which appears to refer to pupil participation; Factor D, which appears to refer to teachers' sociability (the social environment consisting of 8 to 10 year old children in this case) and a total score arrived at by summing the scores on these two factors plus scores on Factor B, open-mindedness, and Factor C, liked by others for such "human" traits as understanding and impartiality and who appeared to be calm. The differences between the mean scores of High (top 27%) and Low (bottom 27%) teachers on these sub-scales were significant (see Table 5.5.)

Medley and Mitzel (1958) developed the OScAR, an observation schedule designed to decrease the amount of judgment required of the observer. They found that a combination of three of their scales, "manifest teacher hostility," "supportive teacher behavior" and "disorderly pupil behavior,"¹ could be called one factor, "emotional climate." This factor seems to be a measure of a similar pattern of behavior to Ryans' pattern x_0 . Pupil-teacher rapport in the elementary classrooms of student teachers was found to be positively related not only to "emotional climate" (Medley and Mitzel 1959), but also to a pattern of

¹For items in these scales, see Appendix B.

responses on the Abasement, Aggression, Achievement and Intra-ception needs on the Edwards Personal Preference Schedule and negatively related to Heterosexuality on this Schedule.

The relationship between "emotional climate" and Edwards Personal Preference Schedule needs is a somewhat tenuous one developed in the following fashion by this writer.

The OScAR was utilized on a sample of 49 teachers in grades 3 through 6 in various schools throughout the City of New York. It was found that the emotional climate score correlated .32 with pupil-teacher rapport as measured by the pupils' reactions to the "my class inventory." It was also correlated .52 with supervisors' ratings of teacher effectiveness made by principals, (Medley and Mitzel, 1959). In a later study (Medley, 1961) the Edwards Personal Preference Schedule was administered to student-teachers, and during student teaching the pupils were given the "my class inventory" so that correlations between pupil-teacher rapport and Edwards Personal Preference scores were then obtained. Utilizing only those scores of the 25 "inconsistent" student teachers, that is, those that Medley assumed were answering honestly in terms of their needs, it was found that pupil-teacher rapport was correlated .44 with Abasement, .40 with Aggression, .36 with Achievement, .19 with Intraception, .22 with Heterosexuality. With a sample of only 25 it is probable that only the first three needs meet tests of statistical significance. Medley combined these needs into a multiple regression equation and

found that they correlated .80 several months later with pupil-teacher rapport scores.

In two independent samples (one of in-service teachers, the other of student-teachers) pupil-teacher rapport is correlated in the former with the OScAR and in the latter group with some Edwards Personal Preference Schedule variables. Even though these correlations are not of a high order and even though there was no direct test of the Edwards Personal Preference Schedule in relation to the OScAR, there is at least the suggestion for investigation of relationship between the Edwards and the OScAR directly.

One cannot assume such a relationship, but logic dictates that it be tested, and tested directly.

There exists then, two observation schedules, the Ryans which is a Likert type rating scale and the OScAR, a time-sampling, check-list record, each of which measures in some fashion the classroom emotional behavior of teachers and pupils and have relationships to teacher personality. The populations studied with these schedules differed and the personality schedules utilized were different. Neither of these studies emphasized any particular theoretical orientation and the Medley study, in particular, is based upon an empirically developed instrument, the OScAR.

Inception of the Problem

As a part of the University of Florida experiment in undergraduate professional education (Gordon, 1960, 1961 a), undergraduates completed both the Edwards Personal Preference Schedule and the Thurstone Temperament Schedule. The women majoring in elementary education resembled Ryans' high criterion groups and differed significantly from his low criterion groups on each of the three Thurstone factors. However, the mean of this same group did not differ significantly from Medley's student teacher population on the five Edwards Personal Preference Schedule needs except to be lower on n Aggression. This means they did not resemble those elementary student teachers who were high on pupil-teacher rapport (see Appendix C).

Thus, the following situation existed. Two studies demonstrated relationships between classroom emotional climate and teacher personality. One study of teachers-in-service used a trait-rating observational technique and the Thurstone Temperament Schedule. The other, of teachers and student teachers, used a check-list, time-sampling technique and a measure of pupil-teacher rapport which was related to the Edwards Personal Preference Schedule. A third group, education undergraduates, when measured on the two personality schedules, resembled the "high" teachers on one schedule but failed to score high on those variables positively correlated with pupil teacher rapport on the other schedule.

Is this result a function of the differences in observation techniques, personality schedules, populations sampled or definition of terms? As Barr states: "While these studies of teacher effectiveness (using factor-analytic procedures) make some contribution to the structuring of teaching ability, it seems reasonably apparent that the structure secured is quite clearly tied to the research design, the data-gathering devices employed, the teachers studied, the value system, and the vocabulary of the particular investigator" (Barr, 1961, 137).

The focus of this study was designed to investigate the relationship between teacher-personality, as measured by both the Edwards Personal Preference Schedule (EPPS) and the Thurstone Temperament Schedule (TTS), and the emotional climate of the classroom, as measured by the OScAR, on a population composed of teaching interns in Florida elementary and secondary schools, all of whom were currently enrolled at the University of Florida.

In addition to the problem of the relative predictability of the two personal schedules when used on a single population as studied by only one observation technique, the problem of empirical versus theoretical relationships is also of concern. Several studies (to be reviewed in more detail in the discussion chapter) have been concerned with the basic characteristics of teachers in comparison with other population groups. The Edwards PPS has been used in several of these studies. As Michaelis points out, "there

is need for a theoretical analysis of teacher-personality. One drawback in personality theory is a lack of basic information about personal traits and characteristics of normal persons who choose teaching as a profession. An analysis of theoretical considerations oriented toward teaching may give clues to the development of predictors that will prove more valuable than the approaches that have been employed in the past." (Michaelis, 1954, 477). This study, as one of its attributes, allows for comparison of the Florida teaching intern population with other teacher populations and professional populations on whom there is EPPS data.

Although a project designed simply to test empirically the utilization of the two personality schedules used in the two separate studies with the additional advantages of one observation procedure with theoretically one population would be worthwhile in its own right, any investigation of the relationship between teacher personality and classroom behavior should go beyond this. It is essential to state some rationale, some theoretical justification, concerning what types of relationships might be expected and why they might be expected.

The general theoretical view espoused here is that the particular organization of needs, the needs-system of the teacher, rather than any single need, will be related to classroom behavior. Further, the organization of needs within an elementary teacher

will be different than that within a secondary teacher, and the psychological structure of women will differ from that of men.

In addition, teacher's perceptions of individual pupils - or rather their ability to perceive their pupils - is conceived of as related both to the psychological organization of the teacher and to the behavior of teacher and pupils. Theoretically, the teacher who is able to understand the personal meaning of the child's behavior will structure the classroom situation in supportive, warm, non-threatening ways. In such classrooms, disorderly pupil behavior should be low, and supportive teacher behavior high.

The problem of measurement of teacher's sensitivity is extremely complex. In this study the case instruments, which were developed previously and will be described in detail later, were used as measures of sensitivity to pupil behavior. Part of the study concerns the relationship between these instruments, the observation schedule, and the personality inventories.

In summary, this project was conceived and designed to investigate:

1. Patterns of personality factors in teaching interns.
2. The relationships between these personality factors and classroom behavior.
3. The ability of teaching interns to be sensitive to the personal meanings of pupil behavior.
4. The interrelationships of personality factors, classroom behavior and sensitivity to pupil behavior.

Other Related Research

The Handbook of Research on Teaching prepared by The American Educational Research Association and edited by Nathan Gage (1963) was published after the research described here was underway. Nevertheless, the best reviews of research related to this project are to be found in the chapters by Medley and Mitzel on "Measuring Classroom Behavior by Systematic Observation," and by Withall and Lewis on "Social Interaction in the Classroom."

Edwards Personal Preference Schedule

Basically researchers using the EPPS in studies of teachers and other professionals have accepted the notion that each need is discrete, and represents the same psychological phenomenon in all populations.

Studies of medical students and other professional groups have used the same basic technique of comparing mean scores on each variable achieved by a particular group with the mean scores achieved by other populations (Fisher, 1962, Gordon, 1963, Guba and Jackson, 1957, Merrill, 1960). Investigations similar to that by Satz and Allen comparing the intercorrelation pattern of a University of Miami population with the Edwards normative group are rather rare (Allen, 1958, Satz and Allen, 1961).

In this project, the use of factor analysis was based on the idea that the way certain needs were intercorrelated might be a more organizational approach to personality structure than

the separate need approach. A comparison of the two approaches including a fuller review is in the discussion of results chapter.

Work on the EPPS in general has been fairly extensive. The Psychological Corporation distributed a 312 item bibliography in 1963. In spite of this, investigation of this list lends support to Getzels and Jackson, who state:

"Published studies using the EPPS with teachers are as yet too new to justify any conclusions concerning its usefulness in studying teacher personality. One obvious advantage of the instrument is that it was derived from a well known conceptual formulation (Murray's need system) to which the empirical findings may readily be related (1963, 704)."

Thurstone Temperament Schedule

There is a dearth of information on the TTS beyond the already mentioned Ryans study.

Observation of Teacher-Pupil Behavior

Barr, in his review of the researches on teacher effectiveness at the University of Wisconsin, highlighted the problem of the criterion of teacher effectiveness. He states, after discussing the difficulties inherent in data-gathering devices and models which attempt to simply add factors, that: "The interaction of teachers and pupils in the situation in which teaching takes place is the focal point of teaching and one of the critical factors in teacher effectiveness, whatever the objective." He states also, "One of the insights developed from these investigations

is that specific teacher acts may ~~not~~ be right or wrong in and of themselves, taken individually, and that there are many alternatives one about as good as another. But one may use behavior records in drawing inferences about important prerequisites to teacher effectiveness, to the professional prerequisites, or to any and all aspects of the learning-teaching situation. This has been the focal point of classroom visitation and conference from the very earliest conception of supervision. The crucial problem is not that we be concerned with them but how to render these inferences more valid and reliable. Traditionally, these inferences have been very subjective and personal. The problem is: How does one order these operations to bring them more generally in keeping with the conventions of science? There is much needed research in this aspect of teacher effectiveness." (Barr, 1961, 148-149).

Observation techniques of time sampling nature have been developed by Flanders (1960) and the Wisconsin Mental Health in Teacher Education project under Withall (1960). Both of these schedules have been utilized to provide measures of classroom climate. However, both require of the observer that he infer the intent of the behavior before he can categorize the response. These procedures derive essentially from group-dynamics theory, and from the inter-action process analysis technique of Bales (1950). Behavior is categorized in terms of roles being played

or types of influence being exerted by the teacher. In utilization of these, no assumptions are made about the personality structures of either teacher or pupils. The attempt, rather, is to study the classroom as an interactional field. It is assumed that the behavior of teacher and pupils is a function of the classroom group process.

Generally, attempts to record the specific behaviors of teachers, their acts rather than intent or role, might be said to stem from the 1920's and particularly from the work of Barr (1929) and Wrightstone (1934). In both of these, lists of specific acts were checked. No sociopsychological theory, such as that briefly mentioned above, lay in back of these studies, although they were generally influenced by the progressive education movement.

Two techniques, one utilizing categories based upon small group theory, the other utilizing specific acts, represent the main streams of non-rating type observation schedules. Neither of them require any theory of personality for use; both report aspects of classroom behavior, although the category system requires that each behavior be categorized while the "acts" system requires only recording the presence of the behaviors listed in the schedule.

Wallen, et. al. found significant relationships between observed teacher behavior and needs in two groups of elementary teachers in Salt Lake City. The dimensions used for observation were similar to those developed by Ryans and ratings by judges from the recorded teachers verbal behavior was used as the measure of

observation. The needs were from a locally developed instrument. In particular, they found the relationship ranging between .30 and .50 between control need as measured by the questionnaire and the controlling behavior of teachers, that is, the degree to which the moment to moment behavior of students is controlled by the teachers. They state "If one desires to predict particular performance of a person under stimulus conditions which are familiar to him, the best prediction may very well result from devices which ask him, in effect, how he behaves in certain situations...It may, in fact, be a misnomer to label such measures "needs". Rather such scores may perhaps better be viewed simply as self-descriptions of preferences, behavior, and the like without becoming involved in the supplementary meanings which attached to the term need." (Wallen, 1963, 31).

Travers (1960) also investigated the relationship between teacher needs and behavior. However, his study used only elementary teachers, and he developed his own instruments for measuring needs and observing classroom behavior.

All of the above studies refer essentially to research on elementary teachers. Ryans, however, studied secondary teachers as well as elementary. In particular, he investigated the directly observed pupil behavior in the classroom along with the observed teacher behavior occurring at the same time. Using correlational procedures which do not permit clear-cut cause-effect statements,

he found, "in the secondary school, pupil behavior (as here defined and assessed) seemed not to be as closely related to teacher behavior as we sometimes assume it to be." (Ryans, 1961, 86). In the elementary school, he says, we have a distinctly different situation: "In the elementary school, then, pupil behavior and teacher behavior seemed to be more noticeably interdependent than in the secondary school, with participating pupil behavior seeming to be related to flexible, original, democratic teacher behavior and controlled pupil behavior to systematic, responsible teacher behavior." (Ryans, 1961, 87).

Use of the OScAR

In the choice of observation tools, the problem of the rater is crucial. In his review, for example, Remmers concludes that rating biases may include "various response sets, such as halo effect; ratings may suffer from selective perception determined by a general liking or disliking of the rating object by the rater...In a sense the study of raters and the rating process is equivalent of the study of accuracy of social perception, or inter-personal perception." (Remmers, 1963, 373).

The OScAR rather than the Ryans Classroom Observation Schedule was selected as the observation tool for this study because it defines emotional climate in more precise, operational, behavioral terms and seems to be freer of rater judgment.

An instrument such as the OScAR is more generally in keeping with attempts to eliminate subjectivity than is a trait-rating approach. It represents a refinement of previous scales (Cornell, 1952, Withall, 1949) in the direction of reducing judgment. Further, the OScAR seems to require less training time for observers and is freer of the inference-making process on the part of the observer. With its focus on specific acts, the OScAR might be seen as reducing the bias of the observer, although one cannot be sure of its elimination. It seems to come closer to "the conventions of science" mentioned above in the quotation from Barr.

Ryans, in his conclusion to his monumental study of the characteristics of teachers, gives a list of recommendations for further research. Of most application here is his suggestion concerning observation. "Research into the refinement of observing and assessing techniques, leading perhaps to the development of behavior check lists and forced-choice scales, to the end of providing more valid behavior-in process criterion data." (Ryans, 1960, 400).

The emotional climate scale of the OScAR was utilized by Lantz in a study of the relationship between classroom emotional climate and various aspects of the concept of self among elementary student teachers. He found that "student teachers' self concepts alone as predictors were not useful in predicting classroom emotional climate. The relationships, however, between self concepts of (a) most elementary teachers and, (b) ideal elementary

teacher, was useful in predicting emotional climate." (Lantz, 1962, 9).

Wilk and Edson used the OScAR in a study of the relationship between personality variables and observed behavior of elementary teachers. They did not use the EPPS or TTS, however, and such needs as dominance and integration were assessed by interview techniques. The emotional climate scale was not singled out for analysis in relation to these needs (Wilk and Edson, 1962).

Bowers and Soar (1961) used the OScAR and the Minnesota Multiphasic Personality Inventory and reported that there was a positive relationship between personality as measured by the MMPI and teacher behavior, as measured by the OScAR.

Although the literature on the OScAR is still small, its use in the above studies and the way it was built suggest that it is a fairly adequate tool for use in studying classroom behavior.

The question of the teacher's perception of children as a factor in classroom behavior has been subject to limited study. One of the problems has been that of definition of "knowledge of" pupils. There is a differences between knowing life history information about a child and seeing how he feels about himself. Person perception theory suggests that the role of the perceiver, and perceived similarity, are factors which must be considered (Tagiuri and Petrullo, 1958).

Gage's work led him to the statement that "Our own negative results should cause us to look more closely at what we mean by 'understanding of pupils.' Such understanding is a basic objective of teacher education curricula...It is indeed highly plausible as a desideratum for teachers. Yet up to now, in our own..and in others' research, support for this proposition has been hard to come by." (Gage, 1958, 100-101).

The problem may be also seriously effected by methodology. How does one evaluate teacher ability to perceive a child? Is there such a trait as "ability to perceive" or is this rather a result of a dyadic process, with the outcome influenced by such facts of who is being perceived, for what purpose, and how close he resembles the perceiver?

Gordon and Woods' (1963) study of several elementary classrooms indicated that both teacher and pupil evidenced perceptual distortion in estimating test performance, but that they both erred in the same direction. If the pupil overestimated himself in relation to his classmates, so did the teacher. The teacher was usually closer to the real performance mark. This study, however, did not deal with observed behavior of either teacher or pupil.

Gordon and Spears (1962) developed two case study instruments, "Debbie" and "Alice" which they found to differentiate reliably among undergraduate education students in their ability to infer children's self reports. Students were given a dupli-

cated report of ten hours of a specimen description behavior record of the child's behavior in the school setting. He then completes a forty-item, five-point rating scale, "How I See Myself" as he infers the child would complete this. The measure of ability to infer self-report is derived by correlating the pattern of ratings assigned by the subject with those actually given by "Debbie," a third grader, and "Alice," a sixth grader.

Previous academic experience, selection of elementary or secondary teaching as a goal, sex and a particular one-semester training program do not seem to contribute to the reliable differences among subjects in their ability to infer. Nevertheless, these differences do indicate that some students are more sensitive to behavior than others. . . (Gordon and Spears, 1962, 3)¹.

They conclude, "We may also ask whether there is a relationship between inferrer need and amount of correlation with self-report. It might be hypothesized that inferrers with a high n Intraception will be better able to infer than those with low scores." (Gordon and Spears, 1962, 19).

Further, in spite of the relative lack of evidence to date, and Gage's pessimism, and because of the need to test perceptual theory, the relationship, if any, between accuracy of interpersonal perception and classroom behavior requires further research.

¹The "How I See Myself" scale is in Appendix E.

This study, through the use of the two case study instruments, was designed to yield some clues about the nature of person perception in terms of its relationship to personality variables within the perceiver and classroom behavior in the latter's classroom.

Hypotheses and Questions

The hypotheses tested in this study are classifiable under three headings: (1) those pertaining to the relationship between personality variables and behavioral variables, (2) those pertaining to other characteristics of the teaching interns and both personality and behavioral variables and (3) those pertaining to person perception. Specifically, they are:

1.1. There will be a positive relationship between total Emotional Climate scores on the OScAR and scores on the Dominant, Impulsive and Sociable subscales of the Thurstone Temperament Schedule.

1.2. There will be a positive relationship between total Emotional Climate scores on the OScAR and scores on needs for Aggression, Achievement, Abasement and Intracception as measured by the Edwards Personal Preference Schedule.

2.1. Elementary teachers will have higher total that is, "more favorable" Emotional Climate scores than secondary teachers.

2.2. Elementary teachers will have higher "Supportive Teacher Behavior" scores than will secondary teachers.

2.3. There will be a lower relationship between teacher behavior and pupil behavior in secondary teachers than in elementary teachers.

3.1. There will be a positive relationship between scores on needs for Intracception, Succorance, Nurturance, Affiliation and scores on ability to infer children's self-reports as measured by "Debbie" and "Alice" case study instruments.

3.2. There will be a positive relationship between scores on "Debbie" and "Alice" and scores on total Emotional Climate on the OScAR.

In addition to these specific hypotheses, this study was designed to answer several questions:

1. Are intern teachers a single population, or do sex differences and teaching level preferences require separation into sub-groups?

2. In addition to the testing of the specific personality variables selected because of the Ryans and Medley data, are there patterns of responses to personality schedules which are related to total Classroom Emotional Climate and to the three sub-scales (Manifest Teacher Hostility, Supportive Teacher Behavior, Disorderly Pupil Behavior)?

3. Is person perception, or sensitivity to pupil behavior, as measured by "Debbie" and "Alice" related to patterns of personality variables?

4. Is person perception related to teacher behavior?

CHAPTER II.

PROCEDURES

The Institutional Setting

The University of Florida has an all-university approach to teacher education. Students preparing for teaching in the secondary school may pursue programs in either the College of Education or the appropriate college for their particular major field. Students in elementary education enroll in the College of Education upon completion of two years of general education in the University College.

Because of the nature of higher education in the State of Florida, many students are transfers from junior colleges within the State or from other senior institutions throughout the country.

Students intern in their senior year, usually in the trimester in which they graduate. In order to be eligible to intern, secondary majors must have completed at least two courses in professional education: one in "human development" and one in "the high school today." Elementary interns must have completed a 15 hour "block" which includes curriculum, the teaching of arithmetic and reading, and courses in professionalized subject matter such as school science, social studies, music, art, physical education, children's literature. During the "block" term each student participates for three weeks in an elementary classroom in the P. K. Yonge Laboratory School.

The internship trimester begins for the secondary intern with a month on campus, in which the entire school day is devoted to general and special methods. The intern is then assigned to a school for ten weeks, returning to the campus for a few days at the end of the trimester. He may be placed as far away from the University as Dade County (Miami), a distance of 350 miles. He is supervised by a University professor, who visits and observes him three or four times.

The elementary intern reports to the assigned school at the beginning of the trimester, and returns to the campus for a week of seminars at the half-way point and again at the end. She spends twelve weeks on-the-job. She is also supervised by a University professor.

A major problem is the location of intern positions; it is extremely difficult to select directing teachers on any basis but volunteering.

Although it is recognized that location, background of experience, and the directing teacher are important variables, there was no control over them.

The Sample

The main determinant of selection for inclusion in the study was geography. All interns located further than about 110 miles from campus were ruled out. In addition, all those whose teaching field was split between elementary and secondary; (music,

art, physical education, speech pathology) were eliminated. Table 2.1 shows the distribution of interns by county and teaching level.

No attempt was made to secure proportionate numbers within each of the secondary teaching fields. There were too few mathematics and science teachers to justify this selection. Similarly, the number of secondary interns enrolled in the College of Arts and Sciences was too few to justify this as a basis of selection.

Because elementary teachers are certified kindergarten-sixth grade and interns are not always placed in a grade level of their own choice, no attempt was made to select on the basis of grade level.

In addition to geographical proximity, interns were selected, if at all possible, where more than one had been assigned to a particular school. This was especially true in the second trimester, when experience had shown that any other procedure was extremely wasteful of observer time and also led to attrition. In fact, every intern in the selected counties was used in the first trimester, and all who met the additional criterion of more than one in a school was used in the second trimester.

Table 2.2 shows the breakdown of the final population of the study by sex, teaching level, subject and college in which enrolled.

The goal was set to secure complete data on fifty elementary and sixty secondary interns; the final population upon whom all

TABLE 2.1.

DISTRIBUTION OF INTERNS BY COUNTY, TRIMESTER
AND TEACHING LEVEL

County	Fall			Winter			N
	Elementary	Jr. High	Sr. High	Elementary	Jr. High	Sr. High	
Alachua	10 (9)*	2 (2)	5 (4)	6 (6)	10 (9)	7 (7)	40 (37)
Bradford				7 (6)		5 (5)	12 (11)
Duval	6 (5)	2 (1)	8 (3)				16 (9)
Gilchrist			4 (3)			4 (2)	8 (5)
Marion	5 (5)	3 (1)	1 (1)	6 (6)	2 (2)		17 (17)
Orange	4 (3)	3 (1)		10 (10)	5 (5)	4 (3)	26 (22)
Putnam			1 (1)				1 (1)
Volusia			2 (0)				2 (0)
Totals	25 (22)	10 (7)	21 (12)	29 (28)	17 (16)	20 (17)	122 (102)

* Figure in parenthesis indicates final population, first figure indicates original sample.

TABLE 2.2.

DISTRIBUTION OF INTERNS BY TEACHING LEVEL, SUBJECT FIELD,
SEX AND COLLEGE IN WHICH ENROLLED

Elementary Interns		
N=49 females 1 male (5th grade)		
Grade	N	
1	9	
2	10	
3	7	
4	10	
5	7	
6	3	
split (K-1, K-5, 3-4, 5-6)	4	

TABLE 2.2. (continued)

DISTRIBUTION OF INTERNS BY TEACHING LEVEL, SUBJECT FIELD,
SEX AND COLLEGE IN WHICH ENROLLED

Secondary Interns				
Junior High School (N=23)				
Subject Field	Male		Female	
	Education	Arts & Science	Education	Arts & Science
English			6	2
Mathematics	6		1	
Science	3		3	
Social Studies			1	
Latin				1
	9	0	11	3
Senior High School (N=29)				
English			1	4
Mathematics	2		1	
Science			1	1
Foreign Language			1	1
Social Studies	3		5	1
Business Education	1		3	
	10	0	12	7

data were secured was fifty elementary and fifty-two secondary interns. Attrition was due mainly to the types of teaching schedules encountered in which it became impossible to secure the required number of observations. A second factor was the lack of flexibility of observer time because of the use of only three observers in the first trimester. Interns were observed in 22 different elementary schools, 9 junior high schools and 10 senior high schools.

Procedures for Data-Gathering

Permission to Observe

The names of all interns in the selected counties were secured from the intern coordinators of the respective (elementary and secondary) departments.

A letter was then sent to the superintendent of public instruction of each of the counties, asking his permission to observe in the county's schools, and indicating the names of the particular schools. Permission was requested to write the principals of these schools. (See Appendix E) All county schools responded favorably.

A similar letter was sent to the principal, with copies to the directing teachers, indicating that county approval had been secured, giving the names of the interns, and a suggested data for a first visit. With rare exceptions, based upon special local conditions, this was received favorably. Phone

call clarifications were used in a few cases where the principal requested further information.

Arrangements for Testing

Since the secondary interns were on campus, all the methods classes were visited, the general aim of the study described, and the interns to be included in the study were notified. Arrangements were made with them to take the test battery, consisting of the two personality schedules and the "Debbie" and "Alice" case study instruments at a time convenient to them, either day or night. This was designed to elicit their favorable cooperation. Testing time was approximately two and a half hours.

The standard directions were used for the personality schedules. In addition, the interns self-scored the TTS so that they had some immediate feedback from the testing situation.

The directions for the case study instruments were:

"The two cases you will be given to read are actual observational materials on youngsters who were in school a few years ago. These observations on each child were made over the course of a semester by a team of observers.

Read the observation record, then look at the 'How I See Myself' form.¹ Each child in the classes of which "Debbie" and "Alice" were members completed this form at the end of the school year.

Complete this form the way you believe that the child observed completed it. Do not assume any notions of the validity of the child's response. Just complete it as you think she would report on herself at the end of the year.

¹See Appendix D

If you think she would report that 'nothing gets her too mad,' circle the (1). If you think she may say she gets mad easily, circle (5). Be sure to read each item carefully, because not all the 1's are positive or 5's negative.

Any questions?"

The collection of data from the elementary interns was more complicated. At the inception of the project they were already "on the job." A letter was sent (Appendix F) to them, and further explanation given at the first observation visit. They were tested, with times again arranged at their convenience, during the mid-term week in which they returned to campus.

This was a less satisfactory procedure than the one utilized for the secondary interns. Intern supervisors from the University were met with many questions when they visited the schools, and they had been poorly briefed by the project director.

In order to prevent a similar situation, the "block" classes were visited before the end of the first trimester and told of the project, and that the population to be studied would be drawn from them. The intern supervisors were given a list of prospective schools and interns, and asked to indicate any problems they felt might occur. They also received copies of the project. No problems were anticipated; none occurred.

It should be re-stated that the accuracy of the observational data, in terms of its being a valid sample of the behavior

of an intern, can be seriously affected by the administrative and public relations aspects of a project. All people who in any way might be involved need to be fully informed, and need to be involved in decision making wherever possible. It was found that when these principles were applied, only one directing teacher denied permission to observe, only one intern sought to be removed from the sample, only a few somehow avoided the testing procedure.

Inter-department relationships between a research project and the people responsible for the instruction and supervision is also a part of the data-gathering operation. Colleagues need and have a right to know the nature of research which may influence the learning situation. Observation schedules were worked out with intern supervisors so that supervision had first priority, and the intern was never faced with both supervisor and researcher on the same day.

Conducting the Observations

There were two phases involved in the observation procedure. First, the observers had to be trained in the use of the schedule and second, it had to be used in the field.

The Observers

In the first trimester, three observers were used. All were doctoral candidates. One was a former principal of an elementary school majoring in social-philosophical foundations

of education; the second was on leave from his position as director of guidance of a large urban school district, majoring in educational psychology; the third was a former coach and junior high school counselor studying in educational administration. In the second trimester, a fourth observer was added. He was a retired military person, with limited secondary school teaching experience, working for a master's degree in secondary education.

Observer Training

Observers were trained by utilizing the facilities of the P. K. Yonge Laboratory School of the University of Florida. After each joint observation, comparison and discussion of the records was conducted. A set of mutual agreed-upon definitions was formulated. The schedule is figure 2.1, the definitions follow:

Observation Schedule Definitions

Scale ONE

1. Any remark directed to one or more pupils with intent to hurt or belittle by means of taunting, mocking, ridicule, contempt, etc.
2. Teacher raises voice to considerably higher level than is necessary for normal classroom communication; loudness not in keeping with activity.
3. Teacher hears a question and deliberately does not answer; turns away; makes remark to student other than one who asked question.

4. Teacher calls pupil dear, etc.; uses term showing fondness or affection.
5. Teacher hugs, pats or caresses pupil; straightens ribbon, etc. (Physical contact only).
6. Same as # 4 above except reverse roles.
7. Same as # 5 above except reverse roles.
8. Same as # 3 above except reverse roles.
9. When more than one quarter of the pupils obviously are not involved or interacting or participating in the activity; day-dreaming, sleeping, looking out window, etc.
10. Pupil indirectly but deliberately acts so as to disrupt activity of one or more other pupils; taps pencil, makes faces, pushes books off desk, moves chair around, etc.
11. Pupil whispers apart from and contrary to class activity.
12. Pupil aids another pupil; acceptable and/or expected by teacher; planning together, sharing materials, helping with problem, etc.
13. Pupil laughs or chuckles apart from and contrary to class activity.
14. Laughter is acceptable to teacher who may even join in; involves the sharing of humor by pupil and teacher.

Scale TWO

1. Teacher verbally reprimands, scolds, upbraids, shows disapproval, or rejection of one or more pupils.
2. Teacher frowns, scowls; any facial or bodily expression or movement that indicates hostility, irritation, antagonism, dislike or disapproval.

3. Teacher verbally expresses approval, satisfaction, pleasure,
(Note: Distinction should be drawn between genuine support and habitual statements not necessarily received by the student as supportive. Examples might include a habitual teacher response of, "Fine," or "All right.")
4. Teacher smiles, caresses, hugs pupil, demonstrates friendliness, acceptance, liking or any action intended to convey positive feeling to pupil.

The Observation schedule is composed of two scales. Scale ONE is used for the first, third and fifth five-minute segments of the half-hour observation; scale TWO is used for the second, fourth and sixth segments of five minutes each. The observer records on scale ONE whether the particular act took place at any time during the segment. Each act can be checked then a maximum of three times per observation, once in each time period.

Scale TWO requires more judgment on the part of the observer. Further, each item in this scale is checked each time it occurs within the observation segment. Items one and three relate to verbal behavior, two and four to non-verbal behavior.

About twenty hours of classroom observation by all three observers simultaneously and ten hours of discussion among the observers and project leader were required for training.

Figure 2.1. THE OBSERVATION SCHEDULE

Scale ONE

	I	III	V	Total
1. t uses sarcasm				
2. t yells				
3. t ign p question				
4. t verb shvs afctn for p				
5. t nonverb shvs afctn p				
6. p verb shvs afctn for t				
7. p nonverb shvs afctn t				
8. p ign t question				
9. pps ignore activity				
10. p shvs abtl disor beh				
11. p whspers				
12. p helps p				
13. p laughs				
14. p and t laugh togethr				
Check				

Observer _____
 School _____
 Date _____
 Intern _____
 Elem _____
 Sec _____
 Subject _____
 (Grade) _____
 No. Pupils _____

Seating Arrangement

Scale TWO

	II	IV	VI	TOTAL
1. Negating				
2. Nonverb Negative				
3. Suggestive				
4. Nonverb Pos				
Check				

The area of difficulty was in scale TWO. It was relatively easy to get complete agreement in scale ONE, but item 11 was difficult, because of the inability to tell when "whisper" was not work-oriented.

The frequency aspects of scale TWO presented some problems. Observers could agree on the presence of an item, but training was required for increased sensitivity to frequency of occurrence. Training was terminated when observer reliability was deemed to be sufficiently high enough for use of the schedule (based upon percentage of agreement reaching better than 90 percent) and because of need to begin field observations.

Conducting the Observations in the Field

Each intern was observed for six periods of one-half hour each by a total of three observers. This meant, in the first trimester, that each observer studied each intern for two periods. In the second trimester, with the addition of the fourth observer, who was trained by the other three until he reached their degree of proficiency, the same basic requirements of three observers for two periods each was met. Scheduling was much easier with four observers, and the number of interns lost because of scheduling difficulties was substantially reduced.

At the first visit, the intern usually arranged a schedule for the further visits. Often, no observation was made the first time, because the intern was not yet working with the class. On occasion, particularly with the elementary interns in the first

trimester, both the directing teacher and the intern requested a conference for clarification of purposes before observation. The observation schedule itself was never shown to the intern, but she was assured that we were not grading her, or evaluating how well she taught subject matter, but that we were generally interested in general classroom activities. It is impossible to estimate the effect of the observer's presence on the intern and the class, except to note that it undoubtedly did influence behavior.

The cooperation of school officials, directing teachers and the interns was excellent. For example, we were often notified in advance of change of schedules so that wasted trips were avoided, schools modified assembly schedules or other activities so that interns could be in classrooms when observers were due. The difficulties of scheduling observations in so many schools at long distances from the campus were greatly ameliorated by this excellent support from the schools.

Procedure for Data Analysis

Scoring The Observation Schedule

The schedule was scored for each of the three sub-scales (manifest teacher hostility, supportive teacher behavior, disorderly pupil behavior) following the directions in Medley and Mitzel (1958). An IBM 709 Fortran¹ program was developed for scoring, utilizing these directions:

¹This program is available upon request.

Manifest Teacher Hostility

- a) Sum of items 1 (t uses sarcasm) and 2 (yells) on scale ONE, converted to standard score.
- b) Proportion of item 1 statements (reproving) to all statements (reproving and supportive) on scale TWO, converted to standard score.
- c) Proportion of item 2 behaviors (nonverb negative) to all behaviors (nonverb negative and nonverb positive) on scale TWO, converted to standard score.
- d) Sum of three standard scores = Manifest Teacher Hostility.

Supportive Teacher Behavior

- a) Sum of items 4 (t verb shows affection p) 5 (t nonverb shows affection p) and 6 (p nonverb shows affection t) and 7 (p nonverb shows affection t) on scale ONE, converted to standard score.
- b) Proportion of item 3 statements (supportive) to all statements (supportive and reproving) on scale TWO, converted to standard score.
- c) Proportion of item 4 behaviors (nonverb positive) to all behaviors (nonverb positive and nonverb negative) on scale TWO, converted to standard score.
- d) Sum of three standard scores = Supportive Teacher Behavior.

Disorderly Pupil Behavior

Sum of items 8 (p ignore t question) 9 (pupils ignore activity) 10 (p shows subtle disorderly behavior) 11 (p whispers)

and 13 (p laughs) converted to standard score = Disorderly Pupil Behavior.

Emotional Climate

Medley and Mitzel offer no standard scoring procedures for Emotional Climate. By investigation of their factor loadings (1958, 12) a score utilizing the loadings of the three sub-scales on the Emotional Climate factor was developed. The loadings, with an n of 49, were: Manifest Teacher Hostility: -.76, Supportive Teacher Behavior: .63, Disorderly Pupil Behavior: -.73.

The Emotional Climate score was derived from the following equation:

$$\text{Emotional climate} = (-.5776 \text{ Manifest Teacher Hostility}) + (.3963 \text{ Supportive Teacher Behavior}) + (-.5329 \text{ Disorderly Pupil Behavior}).$$

Scoring the Personality Schedules

The EPPS and TTS were scored in the conventional fashion, and raw scores were utilized in the analyses.

Scoring the "Debbie" and "Alice" case study instruments.

The case studies were scored by computing a Pearson product-moment correlation coefficient between the actual pattern of answers of the child and the pattern assigned by the intern. The correlation coefficients were then converted to Fisher's Z scores for the analyses.

Design for Analyses

There were a total of 28 scores for each intern: fifteen EPPS scores, seven TTS scores, two case study scores and four observation scores. Each intern was assigned to a group (elementary female, secondary female, male) and analyses were made for each group.

For each variable, means and standard deviations were computed, and then all variables were correlated with each other. This produced an intercorrelation matrix for each group.

These variables were then factor analyzed, by means of the IBM 709 Varimax program, to see what factors emerged in each of the three groups.

This design allowed for comparisons among the groups on each variable as well as comparisons of correlational patterns and factors. The results are reported in the next chapters.

CHAPTER III

RESULTS: IN RELATION TO HYPOTHESES

The results will be reported in three chapters. The first will cover data and analyses in relation to the hypotheses, the second will cover the answers to the questions listed at the end of Chapter I, and the third will present additional data on the observations, the personality schedules and on the case study instruments.

Full discussion of the results will appear after the presentation of all the findings, so that it can be more systematic and integrative. The reader is cautioned, therefore, not to take these results out of context until he has read the chapter on the possible meanings. Some of the results may be due to faults in instrumentation or design. The lack of substantiation of an hypothesis should not be taken as conclusive evidence for rejection.

The Relationships Between Personality Variables and Behavioral Variables

Hypothesis 1.1. There will be a positive relationship between total Emotional Climate scores on the OScAR and scores on the Dominant, Impulsive and Sociable subscales of the Thurstone Temperament Schedule.

This hypothesis evolved from Ryans' findings of relationship between these TTS variables and judges' ratings of elementary teachers' effectiveness. In the present project, the OScAR replaced the judges' ratings, and both elementary and secondary teaching interns constituted the population.

Table 3.1 presents the data. It is apparent that none of the correlation coefficients meet the test of significance at the .05 level. Only in the case of the elementary interns does the correlation coefficient for Dominant come close ($r = .24$, which is significant at the .10 level.).

It should be noted that the Dominant sub-scale is correlated to Manifest Teacher Hostility in different directions for the elementary female and the male populations. Although these coefficients do not reach the .05 level of significance, the P does reach .10 for the males. There is also a positive correlation between Sociable and Manifest Teacher Hostility for the males at the same low (.10) level of significance. Although these two correlations are not of rigorous statistical significance, the size of the male population may be a factor which obscures the issue. The direction of correlation is the reverse of what was hypothesized. For this small group then, there is the suggestion that the more Dominant and Sociable the male intern, the more he will display hostile behavior.

In general, hypothesis 1.1 was not substantiated for the male and secondary female groups, and was not substantiated for the elementary interns except in an indication that Dominant, at a low level of significance, might be positively related to total Emotional Climate.

Hypothesis 1.2. There will be a positive relationship between total Emotional Climate scores on the OScAR and scores on needs

TABLE 3.1.

CORRELATION BETWEEN THE DOMINANT, IMPULSIVE AND SOCIABLE SUBSCALES OF THURSTONE TEMPERAMENT SCHEDULE AND OSCAR SCORES.

OSCAR Score Males * (N = 20)	Thurstone Scale		
	<u>Dominant</u>	<u>Impulsive</u>	<u>Sociable</u>
Manifest Teacher Hostility	.41 ^a	.22	.42 ^a
Supportive Teacher Behavior	-.09	-.17	-.14
Disorderly Pupil Behavior	-.33	-.37	-.12
Emotional Climate	-.12	-.01	-.23

* r = .44 for significance at .05 level

^a significant at .10 level

TABLE 3.1. (continued)
CORRELATION BETWEEN THE DOMINANT, IMPULSIVE AND SOCIABLE SUBSCALES
OF THURSTONE TEMPERAMENT SCHEDULE AND OSCAR SCORES

OSCAR Score	Thurstone Scale		
	<u>Dominant</u>	<u>Impulsive</u>	<u>Sociable</u>
Secondary Females (N = 33)*			
Manifest Teacher Hostility	.13	-.07	-.11
Supportive Teacher Behavior	-.02	.21	.03
Disorderly Pupil Behavior	-.12	-.11	.15
Emotional Climate	-.03	.12	-.03

*r = .34 for significance at .05 level

TABLE 3.1. (continued)
CORRELATION BETWEEN THE DOMINANT, IMPULSIVE AND SOCIABLE SUBSCALES
OF THURSTONE TEMPERAMENT SCHEDULE AND OSCAR SCORES.

OSCAR Score	Thurstone Scale		
	<u>Dominant</u>	<u>Impulsive</u>	<u>Sociable</u>
Elementary Females (N = 49) ^a			
Manifest Teacher Hostility	-.21	.02	-.07
Supportive Teacher Behavior	.16	.06	.11
Disorderly Pupil Behavior	-.19	-.04	-.04
Emotional Climate	.24 ^a	.03	.09

^ar = .28 for significance at .05 level

^asignificant at .10 level

for Aggression, Achievement, Abasement and Intracception as measured by the EPPS. This hypothesis was designed to test, on a broader basis, an extension of Medley's study. He used a group of student teachers low on consistency; this study used teacher interns without attention to their consistency score. In this study, this hypothesis was not substantiated.

Table 3.2 presents the data. None of the correlations reaches the .05 level of significance. There was no relationship found between any of these personality variables and any aspect of emotional climate as measured by the OSAR.

The Differences Between Intern Groups on Observation Scores

Hypothesis 2.1. Elementary teachers will have a more favorable (higher) total Emotional Climate score than secondary teachers.

Hypothesis 2.2. Elementary teachers will have higher Supportive Teacher Behavior scores than will secondary teachers.

Operationally, the three groups were considered as separate populations, and the male and female secondary teachers were not combined.

Table 3.3 presents the data. There are no significant differences on total scores, but the male group tends to score a little lower. When the subscales are examined, the elementary female population differs significantly from the other two on Supportive Teacher Behavior. As a group, elementary intern teachers engage in more supportive behavior than do either their female counterparts in the secondary school or the male intern teachers.

TABLE 3.2.

RELATIONSHIPS BETWEEN NEEDS FOR AGGRESSION, ACHIEVEMENT, ABASEMENT
AND INTRACCEPTION AND OSCAR VARIABLES

	<u>N Aggression</u>	<u>N Achievement</u>	<u>N Abasement</u>	<u>N Intracception</u>
Males (N=20)				
Manifest Teacher Hostility	-.16	.01	.00	-.11
Supportive Teacher Behavior	.15	.01	-.05	-.03
Disorderly Pupil Behavior	-.21	.24	-.11	-.19
Emotional Climate	.22	-.15	.04	.12

TABLE 3.2. (continued)

RELATIONSHIPS BETWEEN NEEDS FOR AGGRESSION, ACHIEVEMENT, ABASMENT, AND INTRACEPTION AND OSCAR VARIABLES

	<u>N Aggression</u>	<u>N Achievement</u>	<u>N Abasement</u>	<u>N Intraception</u>
Secondary females (N=33)				
MTH	.19	.26	.22	-.10
STB	.06	.02	-.20	-.22
DPB	-.01	-.11	.25	-.01
EC	-.01	-.07	-.31 ^a	-.06
Elementary females (N=49)				
MTH	.13	-.06	.01	.12
STB	-.16	-.21	.01	.17
DPB	.03	-.24 ^a	.14	.26 ^a
EC	-.13	.06	-.06	-.11

^aSignificant at .10 level.

TABLE 3.3.

MEANS AND STANDARD DEVIATIONS ON OBSERVATION SCHEDULE

	Males (N=20)		Elementary Females (N=49)		Secondary Females (N=33)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Manifest teacher hostility	-0.13	.99	.23 ^a	1.02	-0.26	.92
Supportive teacher behavior	-0.46	.67	.26 ^{a,b}	1.11	-0.13	.64
Disorderly pupil behavior	.06	.81	-0.13	1.03	.16	1.03
Emotional climate	48.81	8.57	50.30	10.87	50.09	9.11

^aSignificant difference from secondary females at .05 level of confidence^bSignificant difference from males at .001 level of confidence

But, elementary intern teachers also engage in more Manifest Teacher Hostility than do their female colleagues. Here, the expectation, although not formalized into an hypothesis, was that they would engage in less.

The fact that their total score is not different from the other groups seems to be due to differences in Disorderly Pupil Behavior. The elementary pupils seem to display less (although not statistically significant) disorderly behavior than do pupils in the other teaching interns' classroom. This would tend to cancel out the teacher behavior differences.

There seems to be a trend in the data suggesting that these elementary intern teachers engage in more affect-laden (both positive and negative) behavior than do the other two groups, that these male interns engage in less supportive behavior than the female interns, and that elementary teachers experience somewhat less disorderly pupil behavior than secondary teachers.

The use of total Emotional Climate score would seem to conceal important aspects of teacher-pupil behavior which become evident when the sub-scales are utilized.

In general, hypothesis 2.1 was not substantiated, hypothesis 2.2 was substantiated.

Hypothesis 2.3. There will be a lower relationship between teacher behavior and pupil behavior in secondary teachers than in elementary teachers.

Table 3.4 contains the complete intercorrelation data on the OScAR variables. This hypothesis concerns only a portion of the data; the rest will be described in the chapter dealing with other results from observation.

This hypothesis stemmed from the finding by Ryans (1961) of different patterns of relationship between elementary and secondary teachers. To test this hypothesis, the r 's were converted to Fisher's Z 's and then t tests, using the formula to test significant differences in correlation coefficients of uncorrelated samples, were run. The results are depicted in Table 3.5. None were significant. The least amount of relationship was between the male interns' teacher behavior scores and their pupils' behavior scores. This points in the direction of some sex difference, but the trend cannot be accepted as meaningful with these results. The small size of the male group may be influencing the results. Further discussion will be in the later chapter.

Hypothesis 2.3 was not substantiated.

The Measures of Person Perception

Hypothesis 3.1. There will be a positive relationship between scores on needs for Intracception, Succorance, Nurturance, Affiliation and scores on ability to infer children's self-reports as measured by the "Debbie" and "Alice" case study instruments.

These particular needs had been chosen because of their "interpersonal" nature. It was hypothesized that they might be so

TABLE 3.4.

INTERCORRELATION OF OSCAR VARIABLES FOR EACH GROUP
(Males, Elementary Females, Secondary Females).

	Supportive Teacher Behavior	Disorderly Pupil Behavior	Emotional Climate
Males (N = 20)			
Manifest Teacher Hostility	-.67**	.29	-.88**
Supportive Teacher Behavior		-.25	.76**
Disorderly Pupil Behavior			-.67**
Secondary Females (N = 33)			
Manifest Teacher Hostility	-.58**	.43*	-.85**
Supportive Teacher Behavior		-.48*	.77**
Disorderly Pupil Behavior			-.80**
Elementary Females (N = 49)			
Manifest Teacher Hostility	-.44**	.54**	-.86**
Supportive Teacher Behavior		-.33*	.70**
Disorderly Pupil Behavior			-.81**

*Significant at .05 level.

**Significant at .01 level.

TABLE 3.5.

COMPARISON BETWEEN INTERCORRELATIONS ON OSCAR VARIABLES

Variables	Manifest Teacher Hostility		Supportive Teacher Behavior	
	Z	$\bar{t}$	Z	$\bar{t}$
Supportive Teacher Behavior				
Male	.299	.54	.256	.89
Secondary females	.460		-.523	
Male	.299	1.09	-.256	.31
Elementary females	.604		-.343	
Elementary females	.604	.63	-.343	.78
Secondary females	.460		-.523	

organized within the intern in such a way that he or she would act upon these needs so that increased accuracy in "seeing" a child would result. It was felt that a need to know another and to relate emotionally to another would be reflected in ability to perceive the other.

Table 3.6 presents the means and standard deviations on these instruments. Table 3.7 presents the correlational data. Further tables and results will be presented in the next chapter, in relation to the questions concerning "Debbie" and "Alice."

Only in the case of the elementary interns do any of these particular needs relate significantly to either case study instrument. This one significant correlation out of thirty tests may easily be due to chance. Because of these low correlations, no multiple regression equation was developed. It was felt that this would only add error factors, and produce what would look like a significant relationship by combining several insignificant ones.

"Multiple correlation may be particularly deceptive when we have available several variables, each of which yields a rather low correlation with the criterion and from which those yielding the higher correlations with the criterion are selected for the prediction equation. Such selecting tends to capitalize on correlations which might be high because of sampling fluctuations." (McNemar, 1962, 185).

TABLE 3.6.
MEANS AND STANDARD DEVIATIONS ON DEBBIE AND ALICE CASE STUDY INSTRUMENTS

	Debbie		Alice	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Male (N = 20)	.38	.20	.55	.13
Secondary Female (N = 33)	.33	.19	.51	.22
Elementary Female (N = 49)	.27	.25	.53	.19

TABLE 3.7.

CORRELATIONS BETWEEN DEBBIE AND ALICE CASE STUDY INSTRUMENTS AND
INTRACEPTION, SUCCORANCE, NURTURANCE AND AFFILIATION

Personality Variable	Debbie				Alice			
	Male (N=20)	Secondary Female (N=33)	Elementary Female (N=49)	Male (N=20)	Secondary Female (N=33)	Elementary Female (N=49)	Male (N=20)	Secondary Female (N=33)
Intracception	-.07	-.14	.32*	-.02	-.17	.12		
Succorance	-.43	.11	-.03	.18	-.20	-.04		
Nurturance	.21	.02	.08	.05	-.15	.04		
Affiliation	-.05	.01	.00	-.15	-.18	.16		

*Significant at .05 level.

Factor analysis using all variables was employed instead to see if there was a factor on which these particular personality variables and the case study instruments were heavily loaded. There was no such factor. (See Tables 4.1, 4.2, 4.3, in next chapter.)

Hypothesis 3.1 was not substantiated.

Hypothesis 3.2. There will be a positive relationship between scores on "Debbie" and "Alice" and scores on total Emotional Climate on the OScAR.

This hypothesis derived from the idea that ability to understand a child should be reflected in the treatment of all children. It assumed that the "Debbie" and "Alice" case study instruments measure this ability, an assumption which will be examined in the later chapter on these instruments. Here, only the results are presented, complete discussion will appear in the last chapter, after all the findings have been reported.

Table 3.8 presents the data. Of special interest, in terms of the previous paragraph, is the lack of correlation between the two case study instruments. Whatever they measure separately, it is not a common "ability to infer." With this finding, hypothesis 3.2 loses much of its meaning. It is almost academic to note that there are no significant correlations between the case study instruments and the observation schedule variables.

TABLE 3.8.

CORRELATIONS BETWEEN DEBBIE AND ALICE CASE STUDY INSTRUMENTS AND OBSERVATION SCHEDULES SCORES

	Alice	Manifest Teacher Hostility	Supportive Teacher Behavior	Disorderly Pupil Behavior	Emotional Climate
Debbie					
Males (N=20)*	.13	.11	-.03	.20	-.16
Secondary Females (N=33)**	.15	.17	-.03	-.06	-.10
Elementary Females (N=49)***	-.04	.02	-.05	.09	.07
Alice					
Males (N=20)		-.08	-.08	-.34	.18
Secondary Females (N=33)		.14	-.09	-.05	-.09
Elementary Females (N=49)		.19	.09	-.05	-.04

*r of .44 required for significance at .05 level of confidence

**r of .34 required for significance at .05 level of confidence

***r of .28 required for significance at .05 level of confidence

Hypothesis 3.2 was not only not substantiated, but the assumptions about the instruments upon which it rested were not valid. In effect, the hypothesis of a relationship between a general "ability to understand children" and classroom emotional climate was not tested.

Summary

Three sets of hypotheses dealing with (1) the relationship between personality variables and behavioral variables, (2) the differences among teacher intern groups on emotional climate and (3) the relationship between "ability to inter" a child's self-report, personality variables and behavioral variables were tested.

Only one of the hypotheses, that elementary intern teachers will display more Supportive Teacher Behavior than secondary teachers, was supported. All the other hypotheses were not substantiated.

When the OScAR is used as the observation tool, with interns rather than with teachers, the relationships Ryans found between TTS variables and classroom behavior disappear. The possible explanations for this will be discussed in the section on the TTS in Chapter IV and in the discussion in Chapter V. Further, when the OScAR is used as the criterion, rather than a measure of pupil-teacher rapport, and when the population consists of interns unselected for their "inconsistent" responses on the

EPPS, the relationships Medley found between EPPS variables and classroom climate also disappear.

Several additional facts were presented. First, the "Debbie" and "Alice" case study instruments were not adequate tools to test the third set of hypotheses. Because of these, these hypotheses are left unsubstantiated, but not rejected. Second, the use of total Emotional Climate scores obscures some of the differences in teacher and pupil behavior in the classroom. Just as such previous terms as "teacher effectiveness" have proven to be too broad a construct, so also, in this case, might Emotional Climate cover too much territory.

CHAPTER IV

RESULTS: IN RELATION TO QUESTIONS

In Chapter III, the data bearing upon the specific hypotheses were presented. A somewhat false picture of the results is possible, however, unless all the data are organized and utilized. This Chapter presents the data relating to the questions asked at the end of Chapter 1.

The Questions

Question 1. Are intern teachers a single population, or do sex differences and teaching level preferences require separation into sub-groups? Getzels and Jackson argue for the separation of teacher groups: "In addition to these general conceptual limitations, there are a number of specific experimental limitations. For example, there is the limitation of treating teachers--male and female, young and old, primary grade and intermediate grade, teachers of English and of science--as a single group. Often this is done even though differences within the teaching profession may obscure the very differences that need to be revealed." (Getzels and Jackson, 1963, 575).

The classical way to answer such a question is to test, on each variable, whether differences among the groups could be attributable to chance. However, the theoretical position taken in this project is that the organization of needs, the needs-system, rather than any single need is the important variable.

Although separate needs were studied to examine their effects, this other concept, of personality organization, is the central theme.

Factor Analysis. In order to explore this question, therefore, both factor analysis and the usual tests for significant difference was used. Tables 4.1, 4.2 and 4.3 present the factors which emerged from the Varimax rotations of principal axes factor analyses. Only loadings of .40 or greater are presented in these tables for the sake of clarity; the total results are in Appendix G.

The issue might be stated in this fashion; if these three sub-groups of teachers are alike in their personality patterns, then common factors should emerge. Although, because of numbers in each group, there might be somewhat different loadings of some of the variables on some factors, the factor structure of the three groups should essentially resemble each other. The factors, after rotation, have been listed on the tables so that the first three factors are the common ones and the rest, the ones that are distinctive to each group.

Of special interest in this question is the way the EPPS and TTS were built. Supposedly, each variable on each measure is independent of all other variables on that instrument. No high intercorrelations should occur.

In addition, the EPPS is a measure of manifest need, the TTS is a measure of temperament. Are temperament and need somehow

TABLE 4.1.

ROTATED FACTOR LOADINGS (OVER .40), MALES (N=20)

	1	2	3	4	5	6	7	8	9
Variables									
EPPS	LDSHP	NUR AFF	EMOT CLIM	MASC	CHANGE	EN EXP	POS SELF EVAL	AUT	ALICE
ACH						-.71			
DEF				-.71					
ORD	-.40			-.42					
EXH			.56				-.52		
AUT								.72	
AFF		.86							
INT							.55		
SUC	.44					-.43			
DOM	.61								
ABA							-.51		
NUR		.50						-.55	
CHG					.59				
END			-.55						
HET				.79					
AGG		-.63		.43					
TTS									
A	.52							.65	
V						.79			
I						.63			
D	.88								
E							.61		
S	.83								
R							.63		
OSCAR									
MTH			-.81						
STB			.87						
DPB						-.53			
EC			.89						
Alice									.68
Debbie	-.64								

TABLE 4.2.

ROTATED FACTOR LOADINGS (OVER .40), SECONDARY FEMALES (N=33)

[illegible]

TABLE 4.3.

ROTATED FACTOR LOADINGS (OVER .40), ELEMENTARY FEMALES, (N=49)

Variables	1	2	3	4	5	6	7	8	9
EPPS	LDSHP	NUR AFF	EC	INDEP	STAB	ORDER	INT	EXH	ACT END
ACH		-.46							
DEF				-.50					
ORD						.62			
EXH								.63	
AUT				.47					
AFF		.65							
INT							.63		
SUC									
DOM		-.41							
ABA					-.45				
NUR		.83							
CHG	.42								
END								-.43	.42
HET				.44					
AGG								.40	
TTS									
A									.40
V	.50								
I	.75								
D	.75								
E					.47				
S	.79								
R						-.42			
OScAR									
MTH			-.79						
STB			.62						
DPB			-.73						
EC			.94						
Alice									-.61
Debbie					.51				

related? For example, does Dominance on the TTS relate to n Dominant on the EPPS?

The names which have been assigned to these factors are for identification purposes only; no assumption is being made beyond this. In several cases, the factor was named after the variable most highly loaded on it. It is hoped that this will make for ease of presentation.

The first factor, held essentially in common, is "Leadership." Table 4.1, Rotated Factor Loadings for the Males, shows that it is composed of six EPPS and TTS variables combined in such a fashion to suggest the label "Leadership." It includes both the TTS Dominant and the EPPS n Dominance. Although both female groups have a factor named "Leadership," the greatest amount of correspondence occurs in the TTS variables Dominant and Sociable. The secondary females share with the males the high loading of n Dominance on this factor, but it is absent in the elementary females. The females share the presence of Impulsive, absent in the male group.

The common elements, however, seem to be sufficient to establish this as a factor held in common by these groups on these instruments.

The second factor which might be seen as common to all three groups has been labelled "Nurturant Affiliation." It seems to represent a need to relate to people in an emotionally supportive and helpful way. In the males, it includes negative loading

on n Aggression, in both female groups n Achievement is negatively loaded. In each group, it includes different combinations of variables.

The fourth factor in the female groups illustrates some of the differences. For the elementary female interns, n Autonomy is loaded positively on the same factor on which n Deference is loaded negatively. This corresponds to a part of the secondary females' first factor, "Leadership." However, in the elementary females, this fourth factor is also loaded positively with n Heterosexuality. This might represent a pattern of need to relate physically to men, and at the same time to maintain one's own standards of behavior. For lack of a simple descriptive term it is simply labelled here as "Independence" although this conceals the heterosexual element.

For the secondary females, in contrast, n Heterosexually is combined with n Intraception. This is quite a different pattern of need which might indicate a need to understand one's own and the other person's motivations along with the need to relate to the opposite sex. There is no corresponding male factor. Although, on the fourth male factor n Deference and n Heterosexuality are loaded in opposing directions, this factor also includes Order and n Aggression loaded in such a way that the whole factor presents a picture of "Masculinity."

For secondary females, the factor with the most variables loaded on it above .40, (six) has n Deference, n Order and n

Endurance loaded in a positive direction and n Autonomy, n Succorance and n Aggression negatively loaded. This pattern might be seen as representing "Docile Perseverance," and seems to resemble a certain caricature of the "schoolmarm." No such factor appears in the other two groups.

Two additional male factors deserve comment because of the number of variables loaded on them. Factor six combines EPPS and TTS variables. Vigorous and Impulsive are related negatively to n Achievement and n Succorance. It is as though one needs to be physically up and doing, but without goal and without emotional need for others. The name, "Energy Expenditure" was chosen to convey this non-achievement oriented vigor and impulsiveness.

"Positive Self-evaluation," listed as factor seven, combines elements of stability (Stability) with both intellectual reflection (Reflective) and concern for motivations of self and others (n Intraception) with an absence of need to either be the center of attention (n Exhibition) or to feel guilty and inadequate (n Abasement).

Part of this pattern resembles the factor called "Stability" (listed fifth) in the elementary females. Missing, however, in the elementary female factor is the evaluative element, which shows up mostly as a separate factor, "Intraception."

The only other shared factor is the one called "Change" on the males and secondary females. In each case this consists of only the n Change variable loaded sufficiently to appear on Tables 4.1 and 4.2.

Another way of approaching the factor analysis is to examine the mixture of EPPS and TTS items loaded on the same factor. For the males, Thurstone variables are not only related to each other, but always are present in factors with several EPPS variables ("Leadership," "Energy Expenditure," "Positive Self-Evaluation"). Temperament and Manifest Need seem to be inter-related. This holds true, to a lesser extent, for the secondary females ("Leadership," "Abasement," "Exhibition"). In their case, Reflective is a factor by itself. In addition, when EPPS and TTS variables are present in the same factor, the EPPS is represented by a single variable.

The EPPS-TTS relationship appears even less clear in the elementary female interns. Again, when combined, it is either in a two personality variable factor ("Order," "Active Endurance," "Stability") or in the presence of a single EPPS variable ("Leadership"). Only in the male sub-group do they seem thoroughly combined. Is this suggestive, perhaps, of a closer harmony in the males between temperament and manifest need? An answer lies beyond the scope of this project, but has implications for personality theorists.

Other patterns of relationships between personality variables and other measures will be discussed in later sections of this chapter.

Tests of Significant Differences Between Means. The second analysis made to answer the question of whether these three sub-groups are all representative samples of a common, "teacher intern" population was made by means of t tests of all the EPPS and TTS variables. The results are presented in Tables 4.4 and 4.5.

Two variables of the EPPS reveal differences. The mean score for males is higher on n Dominance and n Aggression than the mean scores of both female groups. The secondary females are significantly higher than the elementary group on n Dominance and n Abasement. Forty-five significance tests were run, six indicated significance at the .05 level or better. The probability that this is due to chance must not be overlooked. However, since they are focused upon three variables, the chances are that there may be some real difference here. The difference is not sufficient, however, to say that these are distinct sub-groups.

The TTS presents a similar picture. The differences which occur are mainly between the males and the elementary females. The two female groups do not differ from each other, and the male group differs from the secondary females only on the Vigorous score.

TABLE 4.4.

MEANS AND STANDARD DEVIATIONS, EPPS NEEDS

Need	Male (N=20)		Secondary (N=23)		Elementary (N=49)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Ach	14.55	5.07	13.12	3.99	12.39	4.25
Def	11.15	4.61	11.91	4.05	12.60	3.58
Ord	10.10	5.08	9.64	3.90	10.82	4.06
Exh	13.60	3.67	13.33	3.63	13.82	3.21
Aut	12.30	4.35	10.70	4.52	11.98	3.89
Aff	15.70	4.52	16.00	3.54	16.18	3.96
Int	16.20	5.71	17.21	4.56	18.22	4.19
Suc	10.35	4.38	12.24	4.22	12.43	4.49
Dom	17.75 ^{a,d}	5.00	14.64 ^c	3.95	12.39	4.33
Aba	12.25	4.80	14.30 ^c	4.17	12.18	3.61
Nur	15.20	4.71	17.06	4.55	15.90	4.29
Chg	18.00	4.02	16.42	5.00	17.59	5.06
End	12.60	5.65	11.67	4.44	13.14	5.21
Het	13.70	4.95	14.70	5.45	14.51	5.05
Agg	13.60 ^{b,d}	4.98	9.79	5.02	10.06	3.81

^aSignificant difference from elementary females at .001

^bSignificant difference from elementary females at .01

^cSignificant difference from elementary females at .05

^dSignificant difference from secondary females at .05

TABLE 4.5.

MEANS AND STANDARD DEVIATIONS, THURSTONE TEMPERAMENT SCHEDULE

Factor	Males (N=20)		Sec. Females (N=33)		Elem. Females (N=49)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
Active	10.40	3.84	10.85	4.16	10.33	3.50
Vigorous	11.65 ^{a,b}	4.75	7.39	4.13	8.10	3.38
Impulsive	11.75	3.86	10.24	3.02	10.76	3.44
Dominant	14.40 ^b	4.80	12.12	5.12	11.08	4.45
Emotion- ally Stable	11.40	3.80	9.70	3.66	11.08	3.60
Sociable	13.90	4.10	13.00	3.86	14.06	2.82
Reflec- tive	10.30 ^c	3.05	9.49	3.10	8.33	2.82

^aSignificant difference from secondary females at .001 level

^bSignificant difference from elementary females at .01 level

^cSignificant difference from elementary females at .05 level

If only the second analytic procedure is used, it would seem reasonable to combine at least the two female groups into a single population. One might conclude that differences are slight between the sub-groups, and primarily due to sex.

The factor analysis, which shows that wide differences exist between all three groups in the way the personality variables are organized, precludes such a simple solution. If it is personality organization that is to be studied, then examination of discrete variables may conceal more than it reveals.

The first question, then, is answered, in terms of personality organization as follows: Both sex and teaching level preference should be considered in studying the intern population. The three groups of interns cannot be considered as a single representative sample drawn from the general population "Florida intern teacher."

Question 2. Are there patterns of responses on the personality instruments which are related to observed classroom behavior?

Tables 4.6, 4.7 and 4.8 present the personality variables which correlate significantly with OScAR variables. The number which reach significance, considering that 88 tests (22 personality variables X four OScAR variables) were run, may be due to chance. The piecemeal approach, variable by variable, yields little information.

The factor analyses provide another perspective. Are OScAR variables present on the same factors as personality variables?

TABLE 4.6.

CORRELATIONS BETWEEN PERSONALITY VARIABLES AND
OBSERVATION SCHEDULE SCORES, MALES (N=20),
SIGNIFICANT AT .05 OR BETTER.

Personality Variables	Manifest Teacher Hostility	Supportive Teacher Behavior	Disorderly Pupil Behavior	Emotional Climate
N Exh		.68		.45
N Chg		-.45		
N End	.52	-.44		
Vigor			-.45	

TABLE 4.7.

CORRELATIONS BETWEEN PERSONALITY VARIABLES AND
OBSERVATION SCHEDULE SCORES, SECONDARY FEMALES
(N=33), SIGNIFICANT AT .05 OR BETTER.

Personality Variables	Manifest Teacher Hostility	Supportive Teacher Behavior	Disorderly Pupil Behavior	Emotional Climate
N Exh			-.39	.39
N Aut	.42			
N Aff	-.36			
N Het			-.41	
Reflective	.39			-.36

TABLE 4.8.

CORRELATIONS BETWEEN PERSONALITY VARIABLES AND OBSERVATION SCHEDULE SCORES, ELEMENTARY FEMALES (N=49), SIGNIFICANT AT .05 OR BETTER.

Personality Variables	Manifest Teacher Hostility	Supportive Teacher Behavior	Disorderly Pupil Behavior	Emotional Climate
N Aff		.37*		.32
N Nur		.37*		
N Suc	.29			
Activity			-.34	.34

*Significant at .01 level of confidence.

The "Emotional Climate" score was created by weighting and adding MTH, STB, and DPB. One would therefore expect the obvious: that there would be a factor which could be called "Emotional Climate." The third factor on Tables 4.1, 4.2 and 4.3 lists its composition.

The male group again reveals its differences. It should be reiterated that the sample is small, only twenty, and this may be affecting the results. For the male group, Disorderly Pupil Behavior is not loaded on this factor, but is loaded instead on "Energy Expenditure" in a negative direction. The "Emotional Climate" factor for males is also loaded with n Exhibition (positively) and n Endurance (Negatively).

The secondary females also have n Exhibition present on "Emotional Climate." Upon examination of the correlations, it is worth noting that n Exhibition relates in both these groups, but in different ways. The male teacher with a high need to exhibit engages in more Supportive Teacher Behavior, the secondary female teacher with the same high need elicits less Disorderly Pupil Behavior. (Tables 4.7, 4.8).

In the elementary teacher group, the "Emotional Climate" factor contains no personality variables. The OScAR was originally developed for use in elementary classrooms, yet the relationships found here were not with the elementary intern group.

The separation of pupil behavior from teacher behavior in the male group raises some important questions. Just what are the

dynamics here? What is it that influences the display of disorderly behavior in the classroom of the male intern teacher? At the risk of over-reaching, it may be that the male quality represented by Vigorous is an important part of the situation. Table 4.5 shows that the Vigorous scale of the TTS is the one which clearly differentiates between the sexes. To be male is to be vigorous. The male intern teacher who exemplifies this pattern scores lower on Disorderly Pupil Behavior than the male intern who does not.

The second question must be answered, therefore, with a qualified "yes - but." The nature of results again points to the need to see these groups as distinct. It also indicates that the nature of relationships between scores on personality measures and observed behavior is not straight-forward and clear, but subtle and murky.

Question 3. Is person perception, or sensitivity to pupil behavior, as measured by "Debbie" and "Alice," related to patterns of personality?

The assumption made in the beginning of the project was that both "Debbie" and "Alice" were somewhat equivalent measures of an ability to infer the personal meaning of a child's behavior. It was expected that they would correlate with each other. They do not (Table 3.8). Whatever it is they measure, it is not a single "ability" or any single skill. All hypotheses and questions, therefore, using these instruments as measures of

ability cannot be evaluated. The hypotheses may be sound; the measuring tool proved inadequate to the task.

Whatever is being measured probably falls in the realm of person perception as a dyadic process. Viewing person perception as a dyadic process, the relationship between how a child reports on herself and how an inferrer estimates the child's report will be affected by, among other variables, the personality organization of the inferrer in relation to that of the child, rather than to an overall ability to infer. Examining the factor analyses and Table 4.9 reveals several clues.

First, different personality variables are related to "Debbie" than those related to "Alice." Second, "Debbie" seems to be more closely tied into the inferrer's personality organization; Alice seems to be more independent. This is most clearly seen in the case of the males, where Alice is not correlated either with any particular variables (Table 4.9) or with any personality factor (Table 4.1). In the case of the female interns, "Alice" loads on different factors. It is negatively related to "Active Endurance" in the case of elementary interns and positively related to "Non-Aggressive Stability" in the secondary intern group.

"Debbie" does seem to relate particularly to the personality organization of the male interns. The probability of a chance occurrence of five significant correlations at the .05 level is .004, so that this relationship is more likely not due

TABLE 4.9.

CORRELATIONS BETWEEN CASE STUDY INSTRUMENTS AND PERSONALITY
VARIABLES FOR EACH GROUP, SIGNIFICANT AT .05 OR BETTER.

Personality Variable	Debbie			Alice		
	Male (n=20)	Secondary Female (n=33)	Elementary Female (n=49)	Male (n=20)	Secondary Female (n=33)	Elementary Female (n=49)
N Ach					.40	
N Ord	46					
N Int			.32			
N Dom	-.49					
N End						-.50
Active	-.57*					
Vigorous					.36	
Impulsive		.40				
Dominant	-.44					
Emotionally Stable			.30			
Sociable	-.50	.46				

*Significant at .01 level of confidence

to chance. In addition, these variables (Table 4.9) are all loaded, along with "Debbie" on the same factor, "Leadership." (Table 4.1) Because of the correlation, this means that the more a male's needs are for "Leadership," the less able he will be to infer how "Debbie" reports on herself.

For secondary females, the relationship is in the opposite direction: the higher the need for "Leadership," the more able to infer "Debbie's" self-report. This latter relationship is weaker than that of the males. In the case of the elementary interns, however, the "Leadership" factor is unrelated to "Debbie." Instead, "Stability" is, but at a low level.

When the EPPS and TTS are compared, the latter is a better predictor (that is, has more variables relating to case study instruments) than is the EPPS. If temperament measures something deeper than manifest need--and personality theory and word meanings would suggest it does--ability to perceive accurately in relation to "Debbie" relates to the more central and stable aspects of personality.

Question 3 is answered Yes, but the type and degree of relationship differs as functions of the two instruments and the three populations studied. The two instruments are independent measures of person perception.

Question 4. Is person perception related to teacher behavior?

Because of the lack of validity of "Debbie" and "Alice" as measures of ability to infer, this question was not really examined. Neither

of the case study instruments was related to any of the observation measures.

Summary

Three major categories of results emerge from the analyses of the data presented in this chapter.

First, on the basis of the factor analyses, the interns studied are not a representative sample which can be drawn from a homogeneous population labelled "intern teacher" or even "University of Florida intern teacher." Each intern belongs to a sub-group. There are group differences within the intern population when they are classified according to sex and teaching level.

Second, the relationship between personality factors and "Classroom Emotional Climate" as measured by the OScAR is not a straight-forward one. There are, again, differences between the groups. The most pronounced difference is between the male and the elementary female intern groups. In the latter group, there is no factor common to both personality and observation variables. In the male group, teacher behavior is loaded on a different factor from pupil behavior.

Third, the case study instruments are not measures of a common ability to infer children's self-reports. They do seem to be related to personality factors, especially in the case of "Debbie" for the males. The TTS seems more predictive than does the EPPS. "Alice" seems to be less related than does "Debbie."

CHAPTER V

ADDITIONAL RESULTS

This chapter presents additional findings not originally conceptualized. These are arranged according to instrument.

The Edwards Personal Preference Schedule

In addition to the hypotheses and questions, one other type of analysis could have been made. This would have been to compare the intern group with Edward's normative group, using either t test or analysis of variance. This has been a standard technique for reporting on populations. (Lang, 1960, Satz and Allen, 1961, Fisher, 1962). This was not done because of the finding that the intercorrelation pattern was a more useful device in differentiating among the intern groups in this project.

A few studies went beyond this. Guba and Jackson rank-ordered the needs of novice and veteran teachers, and found them quite distinct, but they did not examine the intercorrelations. On the means test, men veterans did not differ from novice men teachers, but female veterans differed from novice female teachers. The differences were again by sex, and, in the female groups, by experience. (Guba and Jackson, 1957).

Allen compared Miami University students with Edwards norms, using intercorrelation, but he combined male and female students into a single population. (Allen, 1957).

The data were examined to see if the correlations produced by separate groups were different than those reported by Edwards (1958) and Allen (1957) for combined male and female populations. Edwards states:

"Intercorrelations of the variables measured by the EPPS were computed separately for the 749 women and the 760 men in the college normative group. Examination of the two intercorrelation matrices showed that they were sufficiently similar to warrant combining the data so as to obtain a single correlation matrix based upon the complete sample of 1509 subjects.

The intercorrelations are, in general, quite low. The largest coefficient is .46 between Affiliation and Nurturance. The next largest is -.36 between Autonomy and Nurturance. The low values of the intercorrelations indicate that the variables being measured by the EPPS are relatively independent." (Edwards, 1959, p. 20).

Allen reports fewer significant correlations, and only three over $r = .40$ (Order with Deference, Deference negatively with Autonomy, Intracception negatively with Succorance). Table 5.1, 5.2 and 5.3 present the intercorrelations significant at the .05 level or better for the various intern groups, and comparative results from the other two studies.

It is apparent that the EPPS intercorrelations look different and yield generally higher intercorrelations. With

the more homogeneous grouping, one would expect the opposite. Although both the Edwards and Allen populations yield more significant correlations, the actual size of the r 's are low, especially when compared to the r 's obtained for these separate groups.

The separate calculation also points up the difference between the two female groups; although a lower r would be significant because of the larger number of elementary interns, the secondary females have more significant intercorrelations (eighteen to fifteen). The factor loading tables showed the difference in pattern; tables 5.2 and 5.3 show the differences in magnitude of correlation and the number of significant correlations. Only two variables proved completely independent in both female groups: n Intraception and n Abasement. In the secondary female group, n Change was independent and n Nurturance most related.

Because of the small number, the number of significant intercorrelations is fewer for the males, but the size and pattern of the correlations is worth noting. Seven variables are involved, n Deference, n Affiliation, n Nurturance, n Heterosexuality each being related to two others. (Table 5.1)

TABLE 5.1

SIGNIFICANT INTERCORRELATIONS FOR EPPS VARIABLES FOR MALE INTERNS
CONTRASTED WITH EDWARDS AND ALLEN COEFFICIENTS ON THESE VARIABLES^{1,2}

Variables	Nur	Chg	Het	Agg
<u>Deference</u>				
Male		-.46	-.63	
Edwards		-.09	-.28	
Allen		-.20	-.32	
<u>Autonomy</u>				
Male	-.46			
Edwards	-.36			
Allen	-.37			
<u>Affiliation</u>				
Male	.53			-.69
Edwards	.46			-.33
Allen	.34			-.36
<u>Heterosexuality</u>				
Male				.48
Edwards				.15
Allen				.26

¹Top figure: Males (N=20), Second figure: Edwards (N=1509),
Third figure: Allen (N=130).

²An r of .44 required for significance at .05 level for male
group, .05 for Edwards and .17 for Allen.

TABLE 5.2

SIGNIFICANT INTERCORRELATIONS FOR EPPS VARIABLES FOR ELEMENTARY FEMALE INTERNS CONTRASTED WITH EDWARDS AND ALLEN COEFFICIENTS ON THESE VARIABLES 1,2

Variables	Exh	Aut	Dom	Nur	End	Het	Agg
<u>Achievement</u>							
Elem. Females	-.29			-.39			
Edwards	.03			-.30			
Allen	.15			-.31			
<u>Deference</u>							
Elem. Females		-.50	-.29				-.33
Edwards		-.30	-.22				-.31
Allen		-.40	-.18				-.29
<u>Order</u>							
Elem. Females			-.39		.35	-.30	
Edwards			-.16		.33	-.16	
Allen			-.16		.48	-.31	
<u>Exhibition</u>							
Elem. Females					-.40		
Edwards					-.27		
Allen					-.27		
<u>Autonomy</u>							
Elem. Females				-.30			
Edwards				-.36			
Allen				-.37			
<u>Affiliation</u>							
Elem. Females				.59			
Edwards				.46			
Allen				.34			

TABLE 5.2 (continued)

SIGNIFICANT INTERCORRELATIONS FOR EPPS VARIABLES FOR ELEMENTARY FEMALE INTERNS CONTRASTED WITH EDWARDS AND ALLEN COEFFICIENTS ON THESE VARIABLES ^{1,2}

Variables	Exh	Aut	Dom	Nur	End	Het	Agg
<u>Succorance</u>							
Elem. Females				.38			
Edwards				.16			
Allen				.22			
<u>Dominance</u>							
Elem. Females				-.48			
Edwards				-.20			
Allen				-.02			
<u>Endurance</u>							
Elem. Females						-.42	-.39
Edwards						-.27	-.22
Allen						-.31	-.18

¹Top Figure: Elementary females (N=49), Second Figure: Edwards (N=1509), Third figure: Allen (N=130).

²An r of .28 required for significance at .05 level for elementary female group, .05 for Edwards, and .17 for Allen.

TABLE 5.3

SIGNIFICANT INTERCORRELATIONS FOR EPPS VARIABLES FOR SECONDARY FEMALE INTERNS CONTRASTED WITH EDWARDS AND ALLEN COEFFICIENTS ON THESE VARIABLES

Variables	Ord	Exh	Aff	Suc	Nur	Chg	End	Het	Agg
<u>Achievement</u>									
Secondary Females			-.53	-.35	-.42				
Edwards			-.33	-.14	-.30				
Allen			-.12	.07	-.31				
<u>Deference</u>									
Secondary Females	.58			-.37			.62		-.41
Edwards	.26			-.09			.22		-.31
Allen	.41			-.10			.29		-.29
<u>Order</u>									
Secondary Females		-.44		-.48	-.35	-.43	.54		
Edwards		-.21		-.08	-.16	-.18	.33		
Allen		-.17		-.19	-.04	-.32	.48		
<u>Exhibition</u>									
Secondary Females								.40	.49
Edwards								.12	.11
Allen								.22	.13
<u>Autonomy</u>									
Secondary Females			-.35				-.42		
Edwards			-.33				-.13		
Allen			-.34				-.17		

TABLE 5.3 (continued)

SIGNIFICANT INTERCORRELATIONS FOR EPPS VARIABLES FOR SECONDARY FEMALE INTERNS CONTRASTED WITH EDWARDS AND ALLEN COEFFICIENTS ON THESE VARIABLES 1,2

Variables	Ord	Exh	Aff	Suc	Nur	Chg	End	Het	Agg
<u>Affiliation</u>									
Secondary									
Females					.61				
Edwards					.46				
Allen					.34				
<u>Endurance</u>									
Secondary									
Females									-.44
Edwards									-.22
Allen									-.18

¹ Top Figure: Elementary females (N=49), Second Figure: Edwards (N=1509), Third Figure: Allen (N=130)

² An r of .34 is required for significance at .05 level for elementary female group, .05 for Edwards, and .17 for Allen.

In the course of testing, an additional issue presented itself which may have influenced the scores. A number of the interns were married. They raised questions about how to answer several of the items - claiming that before recent marriage they would have answered them differently. They were instructed to answer them the way they felt recently. It might be that the data should have been analyzed in terms of married or single groups. Future use of the instrument might require such an analysis.

Generally, separating into discrete subgroups heightens rather than diminishes the correlations and makes clearer the differences between groups which tend to be lost when they are combined. These results do not agree with Edward's findings quoted above.

The Thurstone Temperament Schedule

The pattern of intercorrelation (Table 5.4) reveals that, for all three groups, Dominant, Sociable and Impulsive are highly related variables. This fact was also reflected in the factor analysis. For these groups, these three variables are not measuring discrete, independent aspects of temperament. These are the same variables which Ryans found to be related to teacher effectiveness.

TABLE 5.4

INTERCORRELATIONS OF TTS VARIABLES, SIGNIFICANT AT .05
LEVEL OR BETTER

Variables	Imp	Dom	Soc
<u>Active</u>			
Elementary			
Secondary	.36		
Males	.47	.47	.47
<u>Vigorous</u>			
Elementary	.34	.29	.35
Secondary			
Males	.62*		
<u>Impulsive</u>			
Elementary		.65*	.65*
Secondary		.72*	.75*
Males		.54	.46
<u>Dominance</u>			
Elementary			.71*
Secondary			.49*
Males			.84*

*Significant at .01 level.

Results reported in Chapter III indicated that these variables were not related to "Classroom Emotional Climate" in the intern groups. A comparison was made between the intern groups and Ryans' groups to explore whether these two groups were similar on the TTS. Table 5.5 presents the data. The Dominant subscale differentiated most clearly between the high and low teachers in Ryans' study. The intern groups all differ from the low group and resemble or surpass the high group's means. The Impulsive scale fails to differentiate among the groups, except on one criterion, "Teacher Sociability." Here Ryans' high group differs from the low group, but none of the intern groups differ from either of Ryans' groups. The Sociable scale reveals that the elementary interns have higher mean scores than Ryans' low teachers and resemble Ryans' high teachers. All of Ryans' teachers were elementary.

One possible explanation for the lack of relationship between the Thurstone scales and "Classroom Emotional Climate" may be that the intern group had too restricted a range of performance on the TTS. Their scores were not different from the high teachers, and did, on the Dominant scale, differ significantly from the low teachers.

Two conclusions emerge: (1) The TTS does not measure, in this population, seven discrete variables. Dominant, Impulsive, and Sociable are all highly inter-related. (2) The intern group

TABLE 5.5.

MEANS FOR FLORIDA INTERN POPULATIONS AND RYANS' IN-SERVICE TEACHER POPULATION,
THURSTONE TEMPERAMENT SCHEDULE VARIABLES

Groups	Criterion					
	A		D		Total	
	Pupil Participation ¹		Teacher Sociability			
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.
<u>Dominant</u>						
U.F. Males	14.40 ^{a,e}	4.80	14.40 ^{b,e}	4.80	14.40 ^{b,e}	4.80
U.F. Secondary Females	12.12 ^d	5.12	12.12 ^e	5.12	12.12 ^d	5.12
U.F. Elementary Females	11.08 ^d	4.45	11.08 ^d	4.45	11.08 ^d	4.45
Ryan's High Teachers	11.83 ^d	5.11	10.90 ^d	4.80	10.82 ^d	5.12
Ryan's Low Teachers	8.53	4.62	8.00	4.41	8.33	4.62
<u>Impulsive</u>						
U.F. Males	11.75	3.86	11.75	3.86	11.75	3.86
U.F. Secondary Females	10.24	3.02	10.24	3.02	10.24	3.02
U.F. Elementary Females	10.76	3.44	10.76	3.44	10.76	3.44
Ryan's High Teachers	11.35	3.38	11.27 ^c	3.19	10.95	3.62
Ryan's Low Teachers	10.05	3.11	9.83	2.98	9.88	3.27

TABLE 5.5 (continued)

Groups	Criterion D				
	A		D		
	Pupil Participation ¹		Teacher Sociability	Overall Rated Effectiveness	Total
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$
<u>Sociable</u>					
U.F. Males	13.90	4.10	13.90	4.10	4.10
U.F. Secondary Females	13.00	3.86	13.00	3.86	3.86
U.F. Elementary Females	14.06 ^c	2.82	14.06 ^d	2.82	2.82
Ryan's High Teachers	14.42	3.89	13.94 ^c	4.16	4.11
Ryan's Low Teachers	12.44	3.58	11.95	3.89	3.71

¹The High and Low Teacher groups varied in size depending upon the criterion: A-High, 52, Low, 43: D-High, 48, Low, 42, T-High, 60, Low, 49. The U.F. populations were: Male 20, Secondary Female 33, Elementary Female 49.

²Ryan's S.D. 's not given, assumed S.D. calculated from his data for High and Low groups.

aSignificant difference with High group, $P = .05$.
 aSignificant difference with Low group, $P = .01$.
 cSignificant difference with Low group, $P = .05$.
 dSignificant difference with Low group, $P = .01$.
 eSignificant difference with Low group, $P = .001$.

more nearly resembles Ryans' high teachers on those sub-scales and on those criteria in which there were significant differences between high and low teachers.

The Observation Schedule

It was reported in Chapter III that the separate scales of the Emotional Climate factor might be more powerful than the total score itself. Several additional analyses were run to examine the internal structure of the observation schedule.

First, Table 3.4 (p. 52) presents the intercorrelations among all the sub-scales for each group. In all three groups, Supportive Teacher Behavior is negatively correlated with Manifest Teacher Hostility. In all cases this correlation coefficient is significant at the .01 level. The teacher who engages in hostile behavior is less likely to also engage in supportive behavior. Further, there is, except in the case of the males, a significant positive correlation between Disorderly Pupil Behavior and Manifest Teacher Hostility, and a significant negative correlation between Disorderly Pupil Behavior and Supportive Teacher Behavior.

In the construction and scoring of these scales, the two teacher behavior scales include proportions of all teacher behavior so that one would expect some correlation. For example, the Manifest Teacher Hostility score includes the proportion of hostile statements to hostile plus supportive statements. The

Disorderly Pupil Behavior scale, however, is independent. The correlation between it and teacher behavior is therefore more meaningful. The lack of a significant correlation in the case of the men may be due to the small number of men in the sample, or to a "real" difference between the dyadic behavior in a male intern's classroom.

In the case of the female interns, the relationship is clearer. Teacher and pupil behavior are related. One cannot say which evokes which. It is far safer to see this as a transactional relationship, each influencing the other.

These findings correspond with Medley and Mitzel, (1958) who report the following intercorrelations:

	MTH	DPB
STB	-.409	-.417
DPB	.626	

Item Analyses

Second, the observation schedules were analyzed to see the frequency with which certain behaviors occurred, and to see if these three intern groups were different on an item-by-item analysis. After frequency distributions were made (Tables 5.6, 5.7, 5.8) means calculated (Table 5.9) an analysis of variance, using a program developed at Florida State University (Analysis of Variance for a completely Randomized Design One-way Classification) was run. Tables 5.10 through 5.23 present the analyses of variance for Scale ONE items.

TABLE 5.6.

FREQUENCY OF OBSERVED BEHAVIORS IN INTERN CLASSROOMS,
MALES* (N=21).

Item	Number of Occurrences																									26- 28- 30-			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	21	27	29	31	33	41	48			
Scale																													
ONE																													
1	10	6	2	2	1																								
2	16	2	2																										
3	17	2	1	1	1																								
4	21																												
5	18	2	1																										
6	20	1																											
7	20	1																											
8	14	5	1	1																									
9	2	7	3	2	2			3	1	1																			
10	5	4	3	1	1	3	2																						
11								1	3	4	2	3	1	2	1	2			2										
12			1	4	1	7	2	2	2		1																		
13			3	4	3	5	1	2	1				2																
14				1	3	4	2	3	2		1		1	1	1														
Scale																													
TWO																													
1	2	2	5		5		1	1	1	1			2			1													
2	7	7	4	1							1									1									
3	1	2		2	4		3	3					2	1	1	1		1											
4						1	1	1			1	1		1	1	1	1	1	1		2	2	4	1	1	1	1		

*N=21 because of the inclusion of a male on whom only observation data were available.

TABLE 5.7.

FREQUENCY OF OBSERVED BEHAVIORS IN INTERN CLASSROOMS.
SECONDARY FEMALES (N=33).

[illegible]

TABLE 5.9

MEAN NUMBER OF OCCURRENCES OF OBSERVED BEHAVIORS PER INTERN CLASSROOM.

	Female Secondary (N=33)		Female Elementary (N=49)		Male (N=21)	
	$\bar{X}$	S. D.	$\bar{X}$	S. D.	$\bar{X}$	S. D.
t uses sarcasm	.36	.81	.57	.70	.95	1.17
t yells	.12	.33	.31	.73	.48	1.01
t ign p question	.18	.46	.41	1.07	.33	.78
t verb shws afctn for p	.09	.29	.31	.54	.00	.00
t nonverb shws afctn for p	.39	.60	2.33	2.46	.19	.50
p verb shws afctn for t	.00	.00	.14	.49	.05	.21
p nonverb shws afctn for t	.00	.00	.31	.54	.05	.21
p ign t ques	.58	.85	.69	.97	.48	.79
p ign act	2.79	2.66	2.88	2.72	3.10	2.76
p shws sbtl disor beh	3.00	2.89	4.12	3.23	2.38	2.03
p whispers	10.97	3.42	9.94	3.56	11.33	3.14
p helps p	5.15	2.34	5.04	2.71	4.48	2.32
p laughs	4.97	2.91	2.67	2.16	5.19	3.02
p & t laugh together	6.21	3.68	5.00	3.24	6.38	3.51
Neg V	7.12	5.06	16.94	10.36	6.67	5.29
Neg NV	1.58	2.41	3.98	3.61	2.14	3.86
Pos V	8.15	3.42	14.14	6.70	8.05	5.13
Pos NV	32.15	12.04	34.22	15.09	22.43	11.42

TABLE 5.10

ANALYSIS OF VARIANCE, ITEM 1, "TEACHER USES SARCASM."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	34.95		
Treatments	2	4.45	2.229	
Error	100	80.59	.806	2.77
Total	103	119.99		

TABLE 5.11

ANALYSIS OF VARIANCE, ITEM 2, "TEACHER YELLS."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	8.17		
Treatments	2	1.67	.837	
Error	100	51.16	.512	1.64
Total	103	61.00		

TABLE 5.12

ANALYSIS OF VARIANCE, ITEM 3, "TEACHER IGNORES PUPIL QUESTION."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	10.57		
Treatments	2	1.02	.507	
Error	100	75.41	.754	0.67
Total	103	87.00		

TABLE 5.13

ANALYSIS OF VARIANCE, ITEM 4, "TEACHER VERBALLY SHOWS AFFECTION TO PUPIL."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	3.14		
Treatments	2	1.72	.859	
Error	100	17.14	.171	5.02*
Total	103	22.00		

*Significant at .01 level of confidence.

TABLE 5.14

ANALYSIS OF VARIANCE, ITEM 5, "TEACHER NONVERBALLY SHOWS AFFECTION TO PUPIL."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	166.61		
Treatments	2	104.50	52.248	
Error	100	313.89	3.139	16.65*
Total	103	585.00		

*Significant at .01 level of confidence.

TABLE 5.15

ANALYSIS OF VARIANCE, ITEM 6, "PUPIL VERBALLY SHOWS AFFECTION TO TEACHER."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	.62		
Treatments	2	.43	.213	
Error	100	12.95	.130	1.65
Total	103	14.00		

TABLE 5.16

ANALYSIS OF VARIANCE, ITEM 7, "PUPIL NONVERBALLY SHOWS AFFECTION TO TEACHER."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	2.49		
Treatments	2	2.15	1.077	
Error	100	15.36	.154	7.01*
Total	103	20.00		

*Significant at .01 level of confidence.

TABLE 5.17

ANALYSIS OF VARIANCE, ITEM 8, "PUPIL IGNORES TEACHER QUESTION."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	38.53		
Treatments	2	.76	.380	
Error	100	83.71	.837	.45
Total	103	123.00		

TABLE 5.18

ANALYSIS OF VARIANCE, ITEM 9, "PUPIL IGNORES TEACHER ACTIVITY."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	862.17		
Treatments	2	1.24	.618	
Error	100	756.59	7.566	.08
Total	103	1620.00		

TABLE 5.19

ANALYSIS OF VARIANCE, ITEM 10, "PUPILS DISPLAY SUBTLE BEHAVIOR DISORDERS."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	1196.13		
Treatments	2	52.65	26.328	
Error	100	874.22	8.742	3.01
Total	103	2123.00		

TABLE 5.20

ANALYSIS OF VARIANCE, ITEM 11, "PUPIL WHISPERS."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	11471.54		
Treatments	2	37.00	18.502	
Error	100	1214.45	12.144	1.52
Total	103	12723.00		

TABLE 5.21

ANALYSIS OF VARIANCE, ITEM 12, "PUPIL HELPS PUPIL."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	2535.15		
Treatments	2	6.45	3.223	
Error	100	653.40	6.534	.49
Total	103	3195.00		

TABLE 5.22

ANALYSIS OF VARIANCE, ITEM 13, "PUPIL LAUGHS."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	1584.62		
Treatments	2	146.40	73.198	
Error	100	698.98	6.990	10.47*
Total	103	2430.00		

*Significant at .01 level of confidence.

TABLE 5.23

ANALYSIS OF VARIANCE, ITEM 14, "PUPIL AND TEACHER LAUGH TOGETHER."

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	3311.22		
Treatments	2	42.31	21.155	1.73
Error	100	1220.47	12.205	
Total	103	4574.00		

TABLE 5.24

PROPORTIONS OF FIVE-MINUTE PERIODS IN WHICH SIGNS OF CLASSROOM BEHAVIOR WERE OBSERVED.

Item	U. Fla. Elem Females (N=49, 882 total time segments)	U. Minn. (N=36, 1080 total time seg- ments)	N.Y.C. (N=49, 882 total time segments)
1	.03	.50	
1 + 2	.025		.22
3	.02	.06	
6 + 7	.01	.02	
4 + 5 + 6 + 7	.04		.05
8	.04	.05	
11	.55	.55	
13	.14	.17	

Scale ONE

Items 1 and 2, used in the scoring of Manifest Teacher Hostility, hardly occur. Only in the case of the males does the mean frequency of occurrence of Item 1 approach 1.0. These interns just do not yell or use sarcasm enough to contribute meaningfully to either their total scores or to comparisons among them.

Items 4, 5, 6 and 7 are used in scoring supportive teacher behavior. Only item 6, "Pupil verbally shows affection to the teacher" is not significant at an .01 level. Although the frequency of occurrence on all four items is very low, they do contribute to pointing up differences among these intern groups. Elementary intern teachers engage in more verbal and non-verbal demonstrations of affection toward their pupils than do the secondary intern teachers. Elementary pupils show more non-verbal affection toward their intern teachers than do secondary pupils. Note the "0" frequency in Items 5 and 6 (Table 5.7) in the case of the secondary females, and the "0" frequency in Item 4 (Table 5.6) for males. Generally, there is little display of affection in either direction in these classrooms; what little does occur is more likely to take place in the elementary classroom.

Items 8, 9, 10, 11 and 13 were used in scoring disorderly pupil behavior. It was reported in Chapter III that there was no significant difference between the means of the groups on this

scale. However, on an item basis, two items emerge as worth attention. Item 10 (Table 5.19) "pupils display subtle behavior disorder" just misses significance at the .05 level with an F of 3.01. The probability is less than .10. Elementary classrooms exhibit more of this behavior than do the secondary classrooms. The elementary classrooms have less "pupil laughter," Item 13, (Table 5.22) than do secondary rooms. Pupil laughter was scored when such laughter was judged as disorderly. It does not imply that the elementary room was less "happy." Indeed, Item 14, "pupil and teacher laugh together" did not differentiate among the groups.

The first seven items, scored for teacher behavior, all have means of less than 1.0 except for Item 5, for elementary females. The highest mean frequency for the last seven items of scale ONE is for Item 11, "pupil whispers," which is observed in the average intern's classroom in about half the time periods.

Our use of the ANOVA reveals significant differences; and a fifth approaches very close to significance at the .05 level. The probability of this occurring by chance is less than .01, so that the differences in these classrooms are probably "real," even though many items of behavior occur rarely.

Are these low frequencies on the first seven items observable only on these particular intern groups? How do

they compare with other groups observed with the OScAR? Two groups were available for comparison, both of which were elementary student teachers. They were New York City first year teachers (Medley and Mitzel, 1958) and Minneapolis - St. Paul student teachers (Wilk and Edson, 1962). In both cases, the data were presented in different fashions, but it was possible to reorganize them for comparative study. Medley and Mitzel present their data as mean proportions of five-minute periods in which these behaviors occurred. Since their study was of forty-nine teachers, observed for six half-hour periods, the total number of five-minute periods was 882, the same as for this project's elementary female group. If it is correct to interpret their "mean proportion" to signify the mean of the proportion of occurrence of the total possible number of occurrences for each item, then, for example, on Table 5.24, the mean proportion for items 1 + 2 is the mean of the proportion of each of these items. If this is so, the data in this project recorded on the same items is directly comparable.

Wilk and Edson report their data in terms of the frequency of occurrence of classroom behaviors in ten observations (each consisting of three five-minute periods) of thirty-six student teachers. This yields a total of 1080 periods. Working from their frequency table (Wilk and Edson, 1962, Appendix B), proportions for each item used in their project and this project were calculated. Where items were combined, mean proportions were computed. Although the different systems of

reporting and the different number of time segments preclude tests of significance, Table 5.24 presents the comparable scores. Only on the first two items are there apparent differences between the Florida elementary interns and each of the other two populations. Florida interns hardly ever use sarcasm; Minnesota student teachers were observed using sarcasm in half the 1080 time segments in which they were observed. Florida interns rarely are observed engaging in the first two items, New York City first year teachers were seen displaying this type of behavior in one-fifth of the periods in which they were observed. These items are the only ones which differentiate between the Florida interns and the other two groups. Unfortunately, Medley and Mitzel do not report proportions on all the items, and Wilk and Edison used a slightly different form of the OScAR than the one used in this project. This cut down the number of comparisons which could be made.

On those items on which comparison could be made, the proportionate frequency of occurrence of hostile teacher behavior of University of Florida elementary interns was less than that observed in New York City beginning elementary teachers or University of Minnesota elementary student teachers.

Scale TWO

The analysis of variance tables of scale TWO items are Tables 5.25 through 5.28. On each of these four items, there are significant differences among the groups. On three items it is

TABLE 5.25

SCALE TWO, ITEM 1, NEGATIVE STATEMENTS.

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	14097.33		
Treatments	2	2568.67	1284.336	
Error	100	6689.00	66.89	19.20*
Total	103	23355.00		

*Significant at .01 level of confidence.

TABLE 5.26

SCALE TWO, ITEM 2, NON-VERBAL NEGATIVE BEHAVIOR

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	827.81		
Treatments	2	126.58	63.291	
Error	100	1141.61	11.416	5.54*
Total	103	2096.00		

*Significant at .01 level of confidence

TABLE 5.27

SCALE TWO, ITEM 3, POSITIVE STATEMENTS

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	12419.04		
Treatments	2	934.77	467.383	
Error	100	3137.19	31.372	14.90*
Total	103	16491.00		

*Significant at .01 level of confidence.

TABLE 5.28

SCALE TWO, ITEM 4, POSITIVE NON-VERBAL BEHAVIOR

Source	D.F.	Sum of Squares	Mean Squares	F
Mean	1	99977.48		
Treatments	2	2093.60	1046.799	
Error	100	18681.92	186.819	5.60*
Total	103	120753.00		

*Significant at .01 level of confidence.

the elementary female group which differs from the others. They make significantly more Reproving Statements (Table 5.25) and Supportive Statements (Table 5.27) than either of the other two groups, and they also engage in significantly more Non-verbal Negative Behavior (Table 5.26) than their colleagues. The male interns, on the other hand, engage in significantly fewer Non-verbal Positive Behaviors than their female peers.

The elementary interns make more evaluative statements which convey emotion than do the secondary teachers. The latter are more neutral in their verbal behavior. Generally, the higher score on Supportive Teacher Behavior for elementary females is a result of a combination of Item 4, 5 and 7 from Scale ONE and Item 3 from Scale TWO. The higher Manifest Teacher Hostility score derives completely from Scale TWO. The use of the Scale TWO system, in which each occurrence of a behavior within the five minute time period is noted seems to be a more sensitive procedure than the Scale ONE approach for detecting differences in teacher behavior. Perhaps the lack of more clear cut differences in pupil behavior may be partly attributable to the absence of Scale TWO items for this aspect of classroom behavior.

Elementary female interns could be compared not only to their Florida peers but also to the New York City beginning teachers. Unfortunately, Medley and Mitzel report means and ranges, but not standard deviations, so significance tests could

not be run. Table 5.29 presents the data, arranged in the same fashion as in Table C of the Medley and Mitzel study (1958).

Even without a significance test, inspection of the table reveals that New York City teachers engage in more emotionally-toned evaluative statements than do the Florida interns. The former average about four statements per five-minute period for both the Reproving and Supportive statements, the latter average less than one occurrence per observation period. In addition, the New York City teachers seem to display more Negative Non-verbal behavior^{*}, and about the same amount of Non-verbal Positive behavior. To some degree, these findings reiterate and emphasize the difference found on Scale ONE, Items 1 + 2 (Table 5.24). The Scale TWO items, however, reveal a clear difference in the Supportive area which does not show up on the first scale. Medley and Mitzel report the proportion of Hostile and Supportive behaviors of the total behavior, and Reproving and Supportive statements of total statements. It is clear that the Florida interns engage in a much higher proportion of supportive behaviors than do the New York City teachers. The relative proportions of statements are about the same.

What can be concluded? First, beginning teachers in the New York City study made many more emotionally toned statements (both reproving and supportive) than did University of Florida elementary interns. Second, the University of Florida group engaged in proportionately more non-verbal positive behaviors than the New York City teachers. The greater frequency of

TABLE 5.29

MEAN NUMBER PER FIVE MINUTE PERIODS OF TEACHERS' AND INTERNS' STATEMENTS AND OTHER EXPRESSIVE BEHAVIORS.

Scale TWO	U. Fla. (N=49)			N.Y.C. (N=49)		
	$\bar{X}$	Range	Proportion	$\bar{X}$	Range	Proportion
1. Reproving	.93	0 - 2.8	.54	4.1	1.2 - 13.4	.55
2. Nonverb Negative	.22	0 - .8	.11	1.32	.22 - 4.8	.53
3. Supportive	.78	0 - 2.0	.46	3.4	0.5 - 6.8	.45
4. Nonverb Positive	1.90	.3 - 3.5	.89	1.15	.14 - 3.1	.47

TABLE 5.30

MEAN CORRELATIONS BETWEEN INTERN INFERENCES AND CHILDREN'S SELF-REPORTS ON "DEBBIE" AND "ALICE"

	"Debbie"	"Alice"
Male (N=20)	.38	.55 ^a
Female Secondary (N=33)	.33	.51 ^b
Female Elementary (N=49)	.27	.53 ^b

^aSignificant at .05 level of confidence

^bSignificant at .01 level of confidence.

statements in the New York group would suggest a more emotionally charged classroom, the almost equal proportions of positive and negative behaviors does not permit any generalized statement about the nature of the direction of emotion. The lower frequency of the first three items in the Florida group would suggest a less emotionally laden situation, and the high proportion of non-verbal positive behaviors would suggest that generally these classrooms have a more positive than negative emotional tone.

There are two cautions which must be raised in interpreting the comparative results. First, although the same item was theoretically observed, there is no assurance that the observers were equally trained. What may have been recorded as "sarcasm" in Minnesota may have escaped unchecked in Florida. Second, it is difficult to compare interns with teachers. The differences in verbal output between the New York and Florida groups may be due to the freedom of the teacher to act and the inhibition of the intern to do so. With these understood, such comparative study yields questions for further research into the nature of the teaching act and the dynamics of the classroom situation.

"Debbie" and "Alice" Case Study Instruments

It has been reported above that these instruments do not correlate with each other, are unrelated to "Classroom Emotional Climate" and their relationships with the personality schedules are different in each case.

Group means on the "Alice" instrument for these three intern groups was about .50, for the "Debbie" instrument, about .20. This is consistent with findings on other education groups and such groups as medical students. In the latter case, only "Alice" has been used. These means seem independent of sex, training or professional choice. When college students are given the case of "Alice" to read, and are asked to infer how she would report on herself, they consistently achieve a mean correlation with Alice's self-report of about .50. They do not do as well on "Debbie," although more pages of data (20 double-spaced pages against 13 pages) are given to them. "Debbie," on the other hand, seems to be more clearly related to the personality structures of the rater.

In the case of Alice the degree of correlation between inferred self-report and her actual self-report is high enough to reject the hypothesis of a chance relationship. Table 3.20 summarizes these data. It may be that the data contained in "Alice" permits the inferrer to see her more clearly and without personal involvement. This is purely hypothetical, and merely suggestive of further investigation of these instruments. "Alice" does demonstrate that, given only written materials gathered during observations in school, without interview or other personal sources of data, an inferrer can judge a child's pattern of responses on a self-report scale. Although much is

unclear, this much is clear, and, in terms of perceptual psychological theory, is an important finding. It will be discussed further in the next chapter.

Summary

This Chapter presented additional data beyond the tests of hypotheses and the answers to questions. These data lead to the following generalizations:

First. The use of factor analytic procedures, and separate intercorrelation matrices by sex and teaching level, demonstrate differences between the intern populations and other populations which were heterogeneous in composition. Intercorrelation matrices of small, more homogeneous groups, show higher correlation coefficients between EPPS variables than are reported for large, heterogeneous populations.

Second. The TTS is not a factor-free test for these interns. There seems to be one common factor, called "Leadership" which is present in all three groups.

Third. The OScAR proved to be an instrument not only capable of differentiating between sex and teaching level groups in this study but also capable of use in comparative studies. The use of items and sub-scales was more sensitive than the use of total "Emotional Climate" scores. Item analysis revealed the low frequency of many of the items, the difference between sex groups, between teaching level groups and between groups studied in other locations. For example, the Florida elementary female interns display more affect-laden behavior than their secondary

peers, but considerably less than New York City beginning teachers. They also display less hostile behavior than Minnesota elementary student teachers or New York beginning teachers, and proportionately more positive behavior than the latter group.

Fourth. The case study instruments revealed that subjects can infer, with some degree of accuracy, the way a child will answer a self-report scale. What influences the degree of accuracy is still unclear.

Generally, there are clear differences in both personality organization and classroom behavior between the three groups of interns, all educated in the same teacher-education institution. These differences indicate that male interns differ from female teachers preparing to teach at the same level, and that secondary interns, regardless of sex, differ from elementary interns.

The implications of these results, and those reported in the previous two chapters, follow in the next chapter.

CHAPTER VI

CONCLUSIONS

Replication Aspects

This project was conceived as a partial replication study, with added features, based upon the work of Ryans and Medley and Mitsel. In these investigations, relationships had been found between the TTS and observers' ratings of teacher effectiveness and the EPTS and both pupil evaluations of pupil-teacher rapport and supervisors' ratings. In addition, pupil-teacher rapport was found to be related to the "Emotional Climate" factor of the OScAR. The TTS-observer rating research was on elementary teachers; the EPTS-rapport study was of elementary student teachers; the rapport-OScAR study was of elementary teachers.

This project failed to substantiate any of the particular relationships found between observed classroom behavior and personality schedules. Why did this result occur? There were several differences between the design of this study and the two researches on which it was partly based.

First, the TTS had been used with elementary teachers in conjunction with observer ratings. Here, it was used with both elementary and secondary intern teachers in conjunction with the OScAR. The differences in both sample and observation procedure might contribute to the changed result. In relation to the sample, the TTS scores of the comparable group in this

project, elementary female interns, essentially resembled the "High" teachers in Ryans' study, and differed in virtually the same fashion from the "Low" teachers as did Ryans' "High" group. This might mean that the TTS personality variables are related to classroom behavior, but the elementary intern group did not have sufficient range, and were already at the upper end of the distribution, so that correlation could not be readily demonstrated. This elementary intern group's correlation between the Dominant scale of the TTS and total "Emotional Climate" score approached significance. The question of statistical versus psychological significance is a complex one. One must be careful not to throw away trends or suggestions arbitrarily. Conversely, there is no point in erring in the direction of imputing meaning to what may be a chance occurrence. With a wider range, this correlation might become clearer.

The male intern teachers studied in this project introduced new dimensions. They were both male and except in one case, secondary intern teachers. It is worth noting, with the same cautions mentioned above, that their TTS scores correlated in the opposite direction to that predicted. There was a positive correlation (although significant at only the .10 level of confidence) between Dominant and Sociable TTS scales and "Manifest Teacher Hostility."

3

In relation to the observation schedule and sample, the items on the schedule in which data on teacher classrooms was available from the Medley and Mitzel study revealed clear differences in amount of emotional expression between the New York City teachers and Florida intern groups, as well as qualitative differences. For many items on the OScAR, the number and range of response of the elementary interns was extremely low. Thus, not only might their TTS score range be restricted, but also their scores on OScAR items were confined to a narrow range. Both types of restriction reduce the size of correlation coefficients.

Although Ryans' results were not duplicated, further utilization of the TTS in conjunction with the OScAR with a classroom teacher population is suggested to follow up on (1) whether a wider range of TTS scores occurs, (2) whether sex differences in relationships between the TTS and the OScAR variables occur, (3) whether there is a wider range of response on OScAR items by teachers as compared to interns, and (4) if the first and third occur, then whether there is a correlation between TTS variables and observed classroom behavior.

Second, in this project there was a direct test of the relationship between the EPPS and the OScAR which was not present in the Medley-Mitzel work. The failure to find such a relationship, therefore, does not refute their findings. It

does cut the neat logical expectation that two things related to a third might be related to each other. In addition, the populations studied with the OScAR differed: Teachers in New York City, interns in Florida. As mentioned above, the range of response of teachers was much broader than that of the elementary interns. This restricted range might be influencing the size of the correlation coefficients.

Although the particular personality variables on the EPPS which Medley and Mitzel found were related to pupil-teacher rapport were not found to be related to OScAR variables in this project, such a result does not preclude further use of the EPPS in conjunction with the OScAR.

Several trends were evident, and these might become more obvious in teacher populations. There was a relationship, in the elementary female intern group, between n Affiliation, n Nurturance and "Supportive Teacher Behavior," ($r = .37$ $p < .01$ in both cases). Although there were too few relationships between the personality schedules and the OScAR variables to rule out their occurrence by chance, this particular pattern makes good psychological sense, especially when the two personality variables themselves are highly correlated ($r = .60$) in this group.

The secondary group also revealed some relationships worth further investigation. The role of n Exhibition in the behavior of male intern teachers ($r = .68$ with "Supportive Teacher Behavior") in contrast to its relationship in female

secondary teachers ($r = .39$ with "Disorderly Pupil Behavior") again leads to the suspicion that the relationship between male personality and classroom behavior is different from that of the female intern teacher. Again, the small number of relationships signals caution, but at least there is a suggestion here for further work.

This suggestion is particularly evident in the unexpected split-off of "Disorderly Pupil Behavior" from the rest of the OScAR variables in the factor analysis of the male interns. The small number in the group may be contributing to error, so that replication is indicated.

In general, although the specific hypotheses were rejected, this may partly be due to the limited range on many OScAR items, the use of interns rather than teachers, the small number in the male group. There are indications of relationships between personality variables and classroom behavior. These indicate different patterns for the three subgroups studied, with the males being most different from the other two groups. These indications are highly tentative. A study of teacher groups, using the same general design, might clarify the picture.

The Measurement of Teacher Personality

Three comments by Getzels and Jackson (1963) are most relevant here. The first, quoted earlier, concerns the fact that teachers should not be treated as a single group. The second has to do with the teaching situation: "Variations

in the teaching situation from one school to another may exist... but little provision is made for taking into account the effect of such situational variables on the experimental results." (p. 575) Their third comment is that research often is "conducted in a theoretical vacuum...Hypotheses are based upon an oversimplification of teacher personality and the teaching situation." (p. 575)

The results of this project reinforce their first point. The factor analyses clearly revealed that, in a supposedly somewhat homogeneous population of interns from a single university, sex and teaching level actually served to divide the population into distinct sub-groups. If it had been possible, further sub-division by subject matter taught and marital status might have also revealed differences.

Previous research using the EPPS with teacher groups used group mean scores on each item. Without a theory of personality organization, such analyses seem logical. If this had been the procedure of choice in this project, the organizational differences would have been overlooked. Getzels and Jackson's third point is thus demonstrable. Theory is essential. In this case, the theoretical position might be classified as somewhat Allportian. That is, each person organizes his various needs in ways which are unique to him. What is important is not the presence or absence of a need, or any other personality variable, or its intensity in one person compared to its intensity in another person. The nature and degree of the relationship of personality

variables to each other within an individual is more descriptive of the total person than simply a listing of needs. Allport defines personality as "The dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought." (Allport, 1961, 28).

The study here departed from a strict Allportian view (and from his view of factor analysis)(1961, 329) by investigating not the unique personality organization of each teacher, but the pattern of organization common to the smallest researchable group to which he belonged - sex and teaching level.

The findings illustrate that groups of individuals within the same profession do differ in the organizational pattern of need and temperament as measured by the EPPS and TTS. Further, this difference in organizational pattern is revealed in the way ability to infer the self-reports of two girls, "Debbie" and "Alice" is related to the personality factors. It is further evident in the way in which observational variables are related (or unrelated in the elementary female group) to personality factors.

Two factors appear to be common to the three intern groups: "Leadership" and "Nurturant Affiliation." Even in these, however, they relate to other variables in different ways. For example, "Debbie" is related to the "Leadership" factor in opposite directions for the male and secondary female groups. It was

mentioned above that n Affiliation and n Nurturance were related to Supportive Teacher Behavior in the elementary female group. Although this observational variable is not loaded at or above .40 on "Nurturant Affiliation" but at .32, this is probably due to the presence of other personality variables on this factor.

The use of factor analytic procedures rather than a variable-by-variable approach to the measurement of teacher personality thus seems to offer some support for the concept of differential personality organization. It is suggested that research on various teacher sub-groups, utilizing this procedure, would help increase the understanding of teacher personality. More sophisticated procedures, perhaps using the schedule items themselves rather than the "Needs" and "Temperaments" as the data for intercorrelation, might indicate organization more clearly.

Comparisons with the general population or with other professional groups could take the form of comparison of factor pattern and composition rather than tests of significant differences on each variable. At the very least, this study indicates that it is not desirable to group the sexes together in a single intercorrelation matrix.

The Observation Schedules

Getzels' and Jackson's second point, that the teaching situation is an important variable, becomes even more pertinent in relation to observation than in relation to different personality organizations of elementary and secondary teachers.

Of what significance is the fact that this project investigated University of Florida intern teachers, placed in schools in

northeastern and central Florida? The schools used were rural, urban (Jacksonville, Orlando) and suburban, the pupils were representative of not only those sub-cultures but also different social classes.

Although it had been recognized that these schools may vary in educational philosophy, community demands and the like, the effects of this are unknown.

Further, the role of the directing teacher is acknowledged by both the interns and the supervisors as being of great importance. The classroom always reflects the directing teacher, although no attempt was made to assess this in any fashion.

The restricted range of responses on Scale ONE would seem to indicate that the differences in school location, directing teacher, school philosophy were not too contributory to the results, but one cannot be sure.

Several results of the observations were indicative of the importance of situational variables. First, elementary and secondary classrooms are different within the intern groups studied, second, elementary interns differed in their display of hostility (on Scale ONE) from their closest comparable group, student teachers in Minneapolis - St. Paul and third, there were marked differences in amount and proportionate quality of expression between the elementary interns and New York City beginning teachers.

Are these differences with other populations due to differences in the situational variables (Florida versus northern

urban centers, interns versus teachers) or are they artifacts of the way in which the observation schedule was used? Theoretically, all three sets of observers recorded behavior labelled "sarcasm." But, although each person was trained so that his results corresponded to those of other members of his observation group, there is no way to know that all three groups of observers were really using a common yardstick. In the absence of such assurance, even though the written descriptions of instructions correspond, these cross-study comparisons are open to question. Ideally, a group of observers, commonly trained, should observe in diverse situations. Although the data in this project were not organized in this fashion, re-analysis on the basis of rural, small town versus urban location is perhaps possible.

Even with these limitations, it seems clear that intern teachers and teachers are different populations. Further work with the OScAR, or sections of the OScAR, with teacher groups is desirable, comparing males to females, elementary to secondary, old to new, etc. Again, these comparisons should include a study of how the different sub-scales are intercorrelated as well as any differences in quantities of behaviors. For example, the relationship of teacher behavior to pupil behavior in each subgroup should be investigated. Is the finding that, in the male intern group, teacher behavior and disorderly pupil behavior were loaded on different personality factors due to the small size of this group, or error factors, or is it true of male teachers?

Further, the use of such labels as "Disorderly Pupil Behavior" may be misleading. The implication is that the pupils should not be engaging in this behavior, but should be "orderly." In view of Wallen's (1963) finding that teacher's needs for control were related to controlling behavior in the classroom, it would be well to incorporate some measure to assess whether the teacher felt these behaviors were really disorderly, or were acceptable on the basis of either some principle of developmental or educational psychology or the teacher's philosophy of education. Obviously, whispering or laughing cannot be automatically held to be negative. They may be "disorderly" but permissible.

The label "Classroom Emotional Climate" is even more suspect. It seems to suffer from two weaknesses. First, groups may achieve comparable mean scores on "Classroom Emotional Climate," as occurred in this study, and be different in the way in which the score was attained. Just as the label "intelligence" or "mental health" is too gross a label for careful study, the notion of a single score for climate is also too gross. It conceals too much. The scores on the subscales, and the scores on the items themselves are more useful and meaningful.

Second, the score is computed in reference to the group being studied. If it is an essentially homogeneous group, differences in scores may look more important than the raw scores on items would warrant. In addition, because of the method of

computation, no comparison on overall climate or on the subscales can be made. It would be helpful if some scoring scheme could be devised which could legitimately be used in comparative studies.

The use of five-minute intervals on Scale ONE may be questioned because of the low number of responses recorded on this type of item in the three studies cited. It may be that either the frequency system or shorter time intervals would increase and broaden the range of response. It would be relatively simple, in a future investigation, to use frequency and hold the time period constant to see if it made any difference.

The observation schedule itself is a valuable tool. Observers can be adequately trained, without undue effort. The difficulties mentioned above are not insurmountable, but are indicative of "the state of the science" at this time.

The Measurement of Person-Perception

The case study instruments obviously were not measuring a common "ability to infer." They were unrelated to each other, and related in different ways to the personality factors in the intern groups. Why did this occur? What do they measure?

In a previous report (Gordon and Spears, 1962) the following variables were indicated as hypothetically influencing "the amount of correlation between the child's self-report and the subject's inference about the child's self-report. We can separate out three sets of variables: Those influencing the self-report, those influencing the subject himself and those which relate to the pupil-observation situation:

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$$SR = f_1 (A, S, SE)$$

$$OI = f_2 (N, SD)$$

where Correlation between SR and OI = $f_3 (AI, TO) (SR) (OI)$

A = age of self-reporter

S = sex

SE = self-esteem of individual self-reporter

N = inferrer needs, as measured, for example by Edwards Personal Preference Schedule

SR = inferrer's self-disclosure to others, as measured by Jourard self-disclosure scale

AI = amount of information available to inferrer

TO = type of observation, that is, participant or non-participant, ecological or structured." (Gordon

and Spears, 1962, 18).

BOTH "Debbie" and "Alice" were based on the same type of observation, both are of the same sex. There is more information (20 pages to 13 pages) in "Debbie." Unpublished research by Gordon indicates that self-disclosure was not a significant variable. This leaves A, SE and N as possible explanations of the consistently higher performance of all groups tested on "Alice." This study revealed no clear relationship between N and "Alice" for the males, and relationships that may easily be due to chance between N and "Alice" in the two female groups. The picture of relationships between N (if the TTS variables are also considered as part of N in this study) and the two case study instruments is unclear. For

the secondary females and males, "Debbie" is clearly related to "Leadership," but negatively for the latter group. If "Alice" seems to be more independent than "Debbie" of personality factors for the males, why the higher correlation between their inferences and the child's self-report?

What is there about "Alice" which enables inferrers to consistently achieve a mean correlation coefficient of approximately .50, when "Debbie" produces not only lower means ($r=.30$) but greater variability of response?

It was not within the province of this project to explore such questions, but they are worthy of mention and brief discussion in view of both perceptual and educational theory. First, it is clear that college students can do rather well in predicting how a child will respond to a self-rating scale when they have been given only mimeographed material based upon classroom observation from an observation booth. Without actually seeing the child at first-hand, or having access to interview or test material, or the child's productions, they correlate significantly and consistently with "Alice," a sixth-grade girl. They do less well on "Debbie" a third grader. One possible explanation is SE (the child's self-esteem). Both children rated themselves from high to low on the scale, but "Debbie" confined herself to the use of 1, 3, 5 on the scale while "Alice" used all five points. This may be a function of either age or self-esteem and self-awareness. This is beyond exploration.

With the data at hand, a further study to explore the individual items is feasible. Are certain items easier to infer accurately than others?

With new populations, information could be controlled to see what information is processed and utilized in inference-making. Are there certain behavior patterns which are used for common inferences on the part of subjects? Are these the accurate inferences? Does certain information lead to error, or to variability of response? If there are particular behaviors that serve as clues, can prospective teachers be trained to recognize these - or do they serve as clues only in the case of a particular child?

Although the picture of relationship between the personality schedules and the case study instruments is cloudy, person perception theory still requires that the perceiver is transacting in a dyadic relationship with the child. One can ask, how does the subjects own self-report correspond to the child's, and is a high correspondence predictive of a high relationship between the inferred and the actual self-report of the child?

Generally, then, the case study instruments raise far more questions than they provided any answers in this project. The expectation was overly simple, the results require a much more sophisticated approach to teacher perception of children.

Summary

Briefly, the most important findings are as follows:
First, that each intern teacher group had its own pattern of

personality organization on the basis of responses to the EPPS and TTS, that these three groups, elementary female, secondary female and male, shared only two factors in common; "Leadership" and "Nurturant Affiliation."

Second, both the EPPS and TTS were not factor-free instruments, and factors emerged from the analysis of these three somewhat homogeneous groups. Intercorrelations were higher than those reported when males and females were grouped together in larger samples. An Allportian view of personality organization seemed supported by the data.

Third, the case study instruments and classroom observation measures were differentially related to the personality factors in these three groups.

Fourth, there are differences between the classroom climates, as measured by the OScAR, in the classrooms of these three groups of interns. These differences are seen in the subscales scores and in the specific items observed, although they do not show up in total scores.

Fifth, there are differences between some aspects of classroom behavior of the elementary interns in comparison with two other elementary populations. These other populations are from different sections of the country, and represent student teachers and beginning teachers in large metropolitan centers.

These five conclusions lead to the generalization that one cannot research teachers in general, but must focus on the

transactional relationship between a given teacher in a given classroom, or, a small group of relatively homogeneous teachers functioning in classrooms which are essentially alike.

Further, the case study instruments did not yield a single measure of "ability to infer," but results from these instruments suggested a separate thorough investigation of this area of teacher perception of the child.

The observation schedule proved to be a reliable and useful tool, but the single label, "Classroom Emotional Climate" proved too broad to explain just what transpired in these classrooms. Further, it was suggested that "Disruptive Pupil Behavior" might be a value-laden and erroneous label for the observed pupil behaviors.

The relationship between intern personality and classroom behavior, as it emerged in this study, presents a far from clear or simple picture. On the basis of these results, a number of suggestions for further research were indicated using teachers rather than interns, modifying the observation schedule, and controlling the situational variables.

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Appendix A

Glossary of Behavior Dimensions, Classroom Observation Record*

Autocratic-Democratic Teacher Behavior

Autocratic

1. Told pupils each step to take.
2. Intolerant of pupils' ideas.
3. Mandatory in giving directions; orders to be obeyed at once.
4. Interrupted pupils although their discussion was relevant.
5. Always directed rather than participated.

Democratic

1. Guided pupils without mandatory.
2. Exchanged ideas with pupils.
3. Encouraged (asked for) pupil opinion.
4. Encouraged pupils to make own decisions.
5. Entered into activities without domination.

Aloof-Responsive Teacher Behavior

Aloof

1. Still and formal in relations with pupils.
2. Apart; removed from class activity.
3. Condescending to pupils.
4. Routine and subject matter only concern; pupils as persons ignored.
5. Referred to pupils as "this child" or "that child."

Responsive

1. Approachable to all pupils.
2. Participated in class activity.
3. Responded to reasonable requests and/or questions.
4. Spoke to pupils as equals.
5. Commended effort.
6. Gave encouragement.
7. Recognized individual differences.

Restricted-Understanding Teacher Behavior

Restricted

1. Recognized only academic accomplishments of pupils; no concern for personal problems.
2. Completely unsympathetic with a pupil's failure at a task.
3. Called attention only to very good or very poor work.
4. Was impatient with a pupil.

Understanding

1. Showed awareness of a pupil's personal emotional problems and needs.
2. Was tolerant of error on part of pupil.
3. Patient with a pupil beyond ordinary limits of patience.
4. Showed what appeared to be sincere sympathy with a pupil's viewpoint.

*From D. Ryans, Characteristics of Teachers, pp. 88-91. These dimensions represent only those items related to characteristic X₀.

Harsh-Kindly Teacher Behavior

Harsh

1. Hypercritical; fault-finding.
2. Cross; curt.
3. Depreciated pupil's efforts; was sarcastic.
4. Scolded a great deal.
5. Lost temper.
6. Used threats.
7. Permitted pupils to laugh at mistakes of others.

Kindly

1. Went out of way to be pleasant and/or to help pupils; friendly.
2. Gave a pupil a deserved compliment.
3. Found good things in pupils to call attention to.
4. Seemed to show sincere concern for a pupil's personal problem.
5. Showed affection without being demonstrative.
6. Disengaged self from a pupil without bluntness.

Pessimistic-Optimistic Teacher Behavior

Pessimistic

1. Depressed; unhappy.
2. Skeptical.
3. Called attention to potential "bad."
4. Expressed hopelessness of "education today," the school system, or fellow educators.
5. Noted mistakes; ignored good points.
6. Frowned a great deal; had unpleasant facial expression.

Optimistic

1. Cheerful; good-natured.
2. Genial.
3. Joked with pupils on occasion.
4. Emphasized potential "good."
5. Looked on bright side; spoke optimistically of the future.
6. Called attention to good points; emphasized the positive.

Appendix B

Classroom Emotional Climate Scales of the OScAR*

Manifest Teacher Hostility. Reliability, .92. This scale contains one block of two items:

S10 Teacher uses sarcasm

S11 Teacher yells

and two additional items:

K6 (Teacher) reproving statement

K7 (Teacher) hostile behavior (non-verbal)

The items on the first block are scored one in each five-minute period in which the indicated behavior is observed. Item K6 represents the proportion of all statements made by a teacher which are classified as critical of pupils or belittling (as, "What was wrong?" or "Can't you keep quiet?"). Item K7 represents the total number of frowns, scowls, and the like that the teacher exhibits. (Items S10 and S11 were recorded in different periods than items K6 and K7.) Scores on the two-item block and on each of the two K-items are transformed to standard scores and then combined, so that the three are equally weighted in the composite.

Supportive Teacher Behavior. Reliability, .84. This scale consists of one block, containing the following items.

S5 Teacher calls pupil "dear," etc.

S6 Teacher demonstrates affection for pupil

S7 Pupil demonstrates affection for teacher

and two additional items:

K1 (Teacher) supportive behavior (non-verbal)

K2 (Teacher) supportive statement

Each item in the three-item block is scored one or zero in each five-minute period, according to whether or not the stated

*From Medley, D. and Mitzel, H., "A Technique for Measuring Classroom Behavior." Mimeo paper, 1958. Changed to present tense for this proposal.

behavior is observed once more or not at all. The block score is the total of the item scores.

The score on item K1 is the total number of teacher smiles (or other gestures or expressions considered to be pupil-supportive) observed; the score on item K2 is the proportion of all statements tallied that are classified as expressing praise, approval, etc.

Scores on the block of three items and on each of the two K-items are transformed to standard scores before they are combined, so that all three are equally weighted in the composite.

Disorderly Pupil Behavior. Reliability, .89. This scale contains two blocks. One block consists of four items:

F1 Pupil ignores teacher's question

F2 Pupil scuffles or fights

F3 Pupil whispers

F4 Pupil laughs

Each of these items was scored one for each period in which it was observed once or oftener; the block score is the total of the item scores.

The other block consists of two items:

S8 Pupil shows hostility to teacher

S9 Pupil shows hostility to pupil

These items are also scored one for each period in which one or more behaviors of the type indicated is observed. The two blocks are combined with equal weights by transforming each to standard measure.

Since behaviors on both blocks are tallied in the same period, a single behavior could be tallied twice--a behavior classifiable in F1, F2, F3, or F4 would be also tallied in either S8 or S9 if it is judged "hostile"--otherwise, it would be tallied only once.

Appendix C

Table C-1. Means and Standard Deviations for Volunteer Elementary Female Population, University of Florida and Queens College Elementary Interns (Medley Study)

	Volunteer Elementary Females (N = 53)		Queens College Elementary Interns (N = 25)	
	$\bar{X}$	S.D.	$\bar{X}$	S.D.
ACH	12.67	4.28	11.8	2.90
DEF	11.60	3.00	12.0	2.90
ORD	8.73	3.53	10.4**	3.51
EXH	14.58	2.93	13.6	3.18
AUT	12.00	3.94	12.1	3.72
AFF	16.20	3.34	17.4	3.75
INT	17.50	4.60	18.0	4.51
SUC	13.37	4.21	11.2***	3.33
DOM	14.28	4.70	12.7	3.84
ABA	13.90	4.83	12.7	4.85
NUR	16.49	4.11	16.2	3.33
CHG	18.77	4.91	18.3	5.36
END	11.75	4.47	14.2***	3.96
HET	16.30	5.48	16.2	4.97
AGG	11.43	4.34	13.0*	3.22

*Significant at .10 level (2-tailed test) from volunteer females.

**Significant at .02 level (2-tailed test) from volunteer females.

***Significant at .01 level (2-tailed test) from volunteer females.

Appendix C

Table C-2. Means for Volunteer Elementary Female Population,
University of Florida and Ryans In-Service-Teacher
Population from Teacher Characteristics Study

Groups	A (Pupil Participation) ¹	CRITERION D (Teacher Sociability)	Total (Overall Rated Effectiveness)
	$\bar{X}$	$\bar{X}$	$\bar{X}$
<u>Dominant</u>			
Vol., Elem. U.F.	10.94**	10.94***	10.94***
High Teachers	11.83***	10.90***	10.82***
Low Teachers	8.53	8.00	8.33
<u>Impulsive</u>			
Vol., Elem. U.F.	11.88	11.88*	11.88*
High Teachers	11.35	11.27*	10.95
Low Teachers	10.05	9.83	9.88
<u>Sociable</u>			
Vol., Elem. U.F.	14.01*	14.01*	14.01*
High Teachers	14.42*	13.94*	13.60
Low Teachers	12.44	11.95	12.37

¹The High and Low Teacher groups varied in size depending upon the criterion: A-High 52, Low 43; D-High 48, Low 42; T-High 60, Low 49. The Elementary Volunteer Population was 53.

*Significant from Low Group at .05 level.

**Significant from Low Group at .02 level.

***Significant from Low Group at .01 level.

Appendix D

Elementary Form

HOW I SEE MYSELF

- | | | | | | | |
|---|---|---|---|---|---|--|
| 1. Nothing gets me too mad | 1 | 2 | 3 | 4 | 5 | I get mad easily and explode |
| 2. I don't stay with things and finish them | 1 | 2 | 3 | 4 | 5 | I stay with something till I finish |
| 3. I'm very good at drawing | 1 | 2 | 3 | 4 | 5 | I'm not much good in drawing |
| 4. I don't like to work on committees, projects | 1 | 2 | 3 | 4 | 5 | I like to work with others |
| 5. I wish I were smaller (taller) | 1 | 2 | 3 | 4 | 5 | I'm just the right height |
| 6. I worry a lot | 1 | 2 | 3 | 4 | 5 | I don't worry much |
| 7. I wish I could do something with my hair | 1 | 2 | 3 | 4 | 5 | My hair is nice-looking |
| 8. Teachers like me | 1 | 2 | 3 | 4 | 5 | Teachers don't like me |
| 9. I've lots of energy | 1 | 2 | 3 | 4 | 5 | I haven't much energy |
| 10. I don't play games very well | 1 | 2 | 3 | 4 | 5 | I play games very well |
| 11. I'm just the right weight | 1 | 2 | 3 | 4 | 5 | I wish I were heavier, lighter |
| 12. The girls don't like me, leave me out | 1 | 2 | 3 | 4 | 5 | The girls like me a lot, choose me |
| 13. I'm very good at speaking before a group | 1 | 2 | 3 | 4 | 5 | I'm not much good at speaking before a group |
| 14. My face is pretty (good looking) | 1 | 2 | 3 | 4 | 5 | I wish I were prettier (good looking) |
| 15. I'm very good in music | 1 | 2 | 3 | 4 | 5 | I'm not much good in music |
| 16. I get along well with teachers | 1 | 2 | 3 | 4 | 5 | I don't get along with teachers |

- | | | | | | | | |
|-----|--|---|---|---|---|---|---|
| 17. | I don't like teachers | 1 | 2 | 3 | 4 | 5 | I like teachers very much |
| 18. | I don't feel at ease,
comfortable inside | 1 | 2 | 3 | 4 | 5 | I feel very at ease, com-
fortable inside |
| 19. | I don't like to try new
things | 1 | 2 | 3 | 4 | 5 | I like to try new things |
| 20. | I have trouble control-
ling my feelings | 1 | 2 | 3 | 4 | 5 | I can handle my feelings |
| 21. | I do well in school work | 1 | 2 | 3 | 4 | 5 | I don't do well in school |
| 22. | I want the boys to like
me | 1 | 2 | 3 | 4 | 5 | I don't want the boys to
like me |
| 23. | I don't like the way I
look | 1 | 2 | 3 | 4 | 5 | I like the way I look |
| 24. | I don't want the girls
to like me | 1 | 2 | 3 | 4 | 5 | I want the girls to like
me |
| 25. | I'm very healthy | 1 | 2 | 3 | 4 | 5 | I get sick a lot |
| 26. | I don't dance well | 1 | 2 | 3 | 4 | 5 | I'm a very good dancer |
| 27. | I write well | 1 | 2 | 3 | 4 | 5 | I don't write well |
| 28. | I like to work alone | 1 | 2 | 3 | 4 | 5 | I don't like to work alone |
| 29. | I use my time well | 1 | 2 | 3 | 4 | 5 | I don't know how to plan |
| 30. | I'm not much good at
making things with my
hands | 1 | 2 | 3 | 4 | 5 | I'm very good at making
things with my hands |
| 31. | I wish I could do some-
thing about my skin | 1 | 2 | 3 | 4 | 5 | My skin is nice-looking |
| 32. | School isn't interesting
to me | 1 | 2 | 3 | 4 | 5 | School is very interesting |
| 33. | I don't do arithmetic
well | 1 | 2 | 3 | 4 | 5 | I'm real good in arithmetic |
| 34. | I'm not as smart as the
others | 1 | 2 | 3 | 4 | 5 | I'm smarter than most of
the others |
| 35. | The boys like me a lot,
choose me | 1 | 2 | 3 | 4 | 5 | The boys don't like me,
leave me out |

36. My clothes are not as I 2 3 4 5 My clothes are nice
I'd like
37. I like school I 2 3 4 5 I don't like school
38. I wish I were built I 2 3 4 5 I'm happy with the way
like the others I am
39. I don't read well I 2 3 4 5 I read very well
40. I don't learn new things I 2 3 4 5 I learn new things easily

Appendix E

Dear

The College of Education has just been awarded a research contract by the U. S. Office of Education to continue its evaluation and research efforts in teacher education.

Last spring, several Florida counties were most gracious in assisting us in the pilot project work. We now turn again for help.

We are endeavoring to study the relationships between test score of interns on several personality measures and their performance in classroom management, classroom emotional climate on the job. In order to accomplish this, we are training several mature doctoral students to use the attached observer schedule developed from the OScAR schedule on which considerable research is being done.

Each intern in our sample (25 elementary in each of the two trimesters, and 30 secondary in each, for a total of 110) is to be observed six times, for one half hour each time. We hope to begin observing elementary interns about September 24, and secondary interns about October 29.

In no way does this research include any study of the school, directing teacher, pupils or community. The sole purpose is to investigate the influence of intern teacher personality on classroom behavior. The directing teacher, school or community will not be included in any analysis or reported in any way.

Specifically this letter is a request for permission to ask the principals of the respective schools listed below if we may come to observe. If you wish a copy of the total research proposal, we shall be happy to furnish it.

May we have your permission? Please use the enclosed slip and self-addressed, stamped envelope to inform us.

Very truly yours,

Ira J. Gordon
Professor of Education
Project Leader

IJG:Mr
Enclosures

Appendix F

Dear

I hope you are enjoying your internship experience and are beginning to feel "in command" of the situation.

As you know, the College is continually working on the problem of improving our teacher education program. We know you will be a good teacher but we still seek ways to make you better.

As a part of this effort, we have had the experimental program (a new group started this fall) and research into other teacher personnel problems.

We have been awarded a contract from the U. S. Office of Education to study the relationships between interns on-the-job and their scores on some personality tests. Of course, both of these are for research purposes only and do not constitute any personal evaluation of any intern.

For obvious reasons, we are drawing our sample of interns (25 elementary, 30 secondary, each trimester) from those counties close to Gainesville.

You, therefore, "have been selected." This means, that if the county office, your principal and teacher assent, a well-trained, mature graduate research assistant will come to observe you from time to time. In no way will he judge you; he will simply record what is going on for the half-hour he is there. This record then goes eventually to the computer where all traces of persons is lost, to see if there are any correlations between behavior and the personality tests we will ask you to take when you come back on campus.

We are sorry not to be able to talk with you first. I hope this letter is clear. If there are any questions, please write me. Let me again say no observer will come without permission of county and school building officials, and you will know in advance.

Sincerely,

Ira J. Gordon
Professor of Education
Project Leader

LJG:mr

Appendix G-1
Rotated Factor Loadings, Males (N = 20)

Variable	Factor								
	1	2	3	4	5	6	7	8	9
1. ACH	.09	-.71	-.12	-.02	-.05	-.05	.11	-.02	-.09
2. DEF	-.05	-.34	.04	-.18	-.71	-.12	.07	.10	.06
3. ORD	-.40	-.01	-.30	-.31	-.42	.10	.20	.07	-.26
4. EXH	.25	.23	-.16	-.14	.23	.52	.08	.57	-.22
5. AUT	.00	.36	-.16	.12	.18	-.18	-.72	.11	.13
6. AFF	-.03	.06	.86	.09	-.04	.10	.05	-.04	-.09
7. INT	.15	.21	.24	.11	-.22	-.55	.09	.01	.11
8. SUC	.44	-.43	.11	.17	.21	.32	-.01	-.20	.14
9. POM	.61	-.20	-.24	-.16	-.17	.01	-.14	.30	.05
10. ABA	-.34	.35	.17	.24	-.08	.51	-.14	-.02	-.13
11. NUR	-.24	.10	.50	-.10	.09	-.24	.55	-.08	.07
12. CHG	-.02	.22	.11	.59	.13	-.03	-.21	-.35	-.17
13. END	-.06	.30	-.34	.15	-.12	-.04	.24	-.55	-.01
14. HET	-.05	-.24	-.14	-.07	.79	.14	-.08	.01	.14
15. AGG	.21	.13	-.63	-.07	.43	-.08	-.21	.17	.14
16. Active	.52	.10	-.01	.05	.25	.13	-.65	.15	-.14
17. Vigorous	.15	.79	-.13	.10	.17	-.16	.05	-.07	-.16
18. Impulsive	.38	.63	.15	.18	-.17	.04	-.34	-.11	-.30
19. Dominant	.88	.27	-.14	-.04	-.12	-.02	-.08	-.19	.07
20. E Stable	-.03	.06	-.04	-.23	.04	-.61	.05	-.22	-.35
21. Sociable	.83	.24	.01	-.08	.21	-.11	.06	-.22	-.21
22. Reflective	.00	.11	-.27	.11	-.09	-.63	-.15	.23	-.08
23. MTH	.24	.05	.00	-.07	.01	.14	.15	-.81	-.12
24. STB	.05	-.03	-.14	-.17	-.04	.14	.09	.87	-.11
25. DPB	-.18	-.53	.15	.02	.23	.12	.12	-.35	-.25
26. EC	-.05	.22	-.11	.01	-.13	-.11	-.11	.89	.19
27. ALICE	-.05	-.03	-.09	-.08	.10	.04	.02	.05	.68
28. DEBBIE	-.64	.19	-.05	-.27	-.07	.17	.24	-.17	.05

Appendix G-2
Rotated Factor Loadings, Secondary Females (N = 33)

Variable	Factor										
	1	2	3	4	5	6	7	8	9	10	11
1. ACH	.04	-.13	-.00	-.29	-.16	.22	.07	.12	-.11	.63	.00
2. DEF	.75	-.21	.12	.13	-.07	.03	.03	-.02	-.15	-.06	.00
3. ORD	.72	-.11	.02	-.04	.14	.12	-.02	-.31	-.07	-.02	.01
4. EXH	-.39	.07	.06	-.06	-.01	-.33	-.03	.22	.40	-.02	.41
5. AUT	-.45	-.15	-.31	.16	-.16	.14	-.03	.19	-.02	.37	-.15
6. AFF	-.01	.05	.05	.02	-.05	-.00	-.26	.05	-.05	-.79	.02
7. INT	.12	-.04	.58	.02	-.06	.03	.06	-.04	-.01	-.12	-.06
8. SUC	-.41	.07	-.29	.17	.11	-.01	.16	-.10	-.06	-.30	-.25
9. POM	-.27	.62	.17	.18	.19	.04	.05	.06	.04	.26	-.08
10. ABA	.00	.14	.06	-.66	.03	.00	.08	-.17	.07	-.01	-.20
11. NUR	-.05	.02	.06	-.09	-.04	.08	.31	.18	-.01	-.76	.08
12. CHG	-.17	.10	-.05	.17	.04	-.06	.05	.61	.01	-.09	.12
13. END	.78	.00	-.04	.04	.04	.14	.14	.03	.13	.02	.12
14. HET	-.28	-.06	.46	-.07	.14	-.14	-.25	-.07	.12	.25	.30
15. AGG	-.48	.01	.03	.19	-.03	-.51	.15	.02	.17	.24	.05
16. Active	-.28	.19	.05	-.40	.17	-.11	.12	.08	-.23	.30	.22
17. Vigorous	-.04	.09	-.10	-.47	-.12	.45	.16	-.08	-.06	.19	-.04
18. Impulsive	-.13	.85	-.10	-.23	.08	-.02	.05	-.02	.01	-.08	.18
19. Dominant	-.22	.75	.09	-.07	.02	.12	.15	.01	.41	-.07	.00
20. E Stable	.13	.21	.09	.11	.09	.67	.05	-.06	.02	.01	.05
21. Sociable	.11	.80	-.15	-.06	.02	.10	.09	.02	-.28	-.24	-.05
22. Reflective	.09	.07	.02	-.15	.02	.01	.63	.03	.01	.07	-.27
23. MTH	-.22	.04	-.07	-.03	.09	.05	.18	-.02	.09	.36	-.70
24. STB	.01	.05	-.29	.03	-.06	-.11	.02	-.03	-.07	.05	.82
25. DPB	.03	-.04	-.19	-.10	-.14	-.18	.08	-.10	-.16	-.19	-.70
26. EC	.07	-.01	.05	.11	-.01	.02	-.13	.07	.01	-.07	.95
27. ALICE	.10	-.17	-.20	-.28	.09	.44	-.13	.29	.13	.25	
28. DEBBIE	.14	.43	-.10	-.04	.57	.14	.04	.06	-.02	-.03	

Appendix G-3
Rotated Factor Loadings, Elementary Females (N = 49)

Variable	Factor								
	1	2	3	4	5	6	7	8	9
1. ACH	-.31	.15	.08	.00	.08	.03	-.46	-.01	-.33
2. DEF	.17	-.12	.08	-.50	.01	-.27	.18	-.08	-.03
3. ORD	.22	-.62	-.13	-.12	-.13	-.20	-.01	-.01	-.15
4. EXH	-.00	.02	.02	.09	.10	.01	-.02	.01	.63
5. AUT	-.09	-.07	-.03	.47	-.06	.14	-.25	-.03	.09
6. AFF	-.28	.06	.20	-.23	.17	.15	.65	-.16	-.14
7. INT	.62	-.05	-.10	-.08	.05	.04	-.07	-.10	-.10
8. SUC	-.07	.06	-.18	.12	.09	-.37	.39	.28	.19
9. POM	-.02	.33	.03	.20	.26	.15	-.41	-.14	.18
10. ABA	.11	.03	-.04	-.07	-.10	-.10	.01	.45	-.09
11. NUR	.02	-.05	.12	-.11	.06	-.10	.83	.03	.01
12. CHG	-.18	-.09	-.29	.01	-.26	.42	.07	-.04	-.07
13. END	.13	-.26	.22	-.21	-.42	-.13	-.28	.07	-.43
14. HET	.14	.15	-.06	.44	.04	.05	.12	-.15	.26
15. AGG	-.29	.24	-.11	.19	-.06	-.02	.16	.09	.40
16. Active	-.13	-.03	.33	.05	-.40	.27	-.16	.06	.30
17. Vigorous	-.12	-.27	.05	.21	-.01	.50	-.11	.13	-.17
18. Impulsive	.03	.25	-.03	.01	.07	.75	-.06	-.13	.09
19. Dominant	-.00	.23	.21	.11	.16	.75	-.05	-.04	.03
20. E Stable	.12	.11	.08	-.10	.07	.14	-.12	-.47	-.22
21. Sociable	.11	-.04	.08	.18	.13	.79	.03	-.17	.16
22. Reflective	.18	.42	.12	-.06	.01	-.05	-.18	.05	-.35
23. MTH	-.01	-.12	-.79	-.08	.16	-.02	-.06	.07	.19
24. STB	.25	.12	.62	-.30	.02	.14	.32	.08	.07
25. DPB	.31	.08	-.73	.05	-.05	-.02	.08	.06	-.08
26. EC	-.05	.06	.94	-.08	-.04	.06	.10	-.04	-.04
27. ALICE	.01	.06	-.04	-.06	.61	.16	.02	-.09	.09
28. DEBBIE	.32	-.03	-.07	.08	-.05	-.07	.09	-.51	.04

Appendix H

Description of the Needs on The Edwards
Personal Preference Schedule

1. ach Achievement: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.
2. def Deference: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.
3. ord Order: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.
4. exh Exhibition: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experience, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.
5. aut Autonomy: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.
6. aff Affiliation: To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.
7. int Intraception: To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do

things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

8. suc Succorance: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. dom Dominance: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. aba Abasement: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. nur Nurturance: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. chg Change: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. end Endurance: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. het Heterosexuality: To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite

sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. agg Aggression: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

Appendix I

Description of the Areas Covered by The Thurstone Temperament Schedule*

Active (A). A person scoring high in this area usually works and moves rapidly. He is restless whenever he has to be quiet. He likes to be "on the go" and tends to hurry. He usually speaks, walks, writes, drives, and works rapidly, even when these activities do not demand speed.

Vigorous (V). A person with a high score in this area participates in physical sports, work requiring the use of his hands and the use of tools, and outdoor occupations. The area emphasizes physical activity using large muscle groups and great expenditure of energy. This trait is often described as "masculine," but many women and girls will score high in this area.

Impulsive (I). High scores in this category indicate a happy-go-lucky, daredevil, carefree, acting-on-the-spur-of-the-moment disposition. The person makes decisions quickly, enjoys competition, and changes easily from one task to another. The decision to act or change is quick regardless of whether the person moves slowly or rapidly (Active), or enjoys or dislikes strenuous projects (Vigorous). A person who doggedly "hangs on" when acting or thinking is typically low in this area.

Dominant (D). People scoring high on this factor think of themselves as leaders, capable of taking initiative and responsibility. They are not domineering, even though they have leadership ability. They enjoy public speaking, organizing social activities, promoting new projects, and persuading others. They are the ones who would probably take charge of the situation in case of an accident.

Stable (E for emotionally stable). Persons who have high Stable scores usually are cheerful and have an even disposition. They can relax in a noisy room, and they remain calm in a crisis. They claim that they can disregard distractions while studying. They are not irritated if interrupted when concentrating, and they do not fret about daily chores. They are not annoyed by leaving a task unfinished or by having to finish it by a deadline.

Sociable (S). Persons with high scores in this area enjoy the company of others, make friends easily, and are sympathetic, cooperative, and agreeable in their relations with people. Strangers readily tell them about personal troubles.

*From Thurstone Temperament Schedule, Examiner Manual, April, 1953.

Reflective (R). High scores in this area indicate that a person likes meditative and reflective thinking and enjoys dealing with theoretical rather than practical problems. Self-examination is characteristic of reflective persons. These people are usually quiet, work alone, and enjoy work that requires accuracy and fine detail. They often take on more than they can finish, and they would rather plan a job than carry it out.

A brief summary of the above descriptions is printed on both the answer pad and answer sheet.